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# The Philosophy of the Bath;

OR,

## AIR AND WATER IN HEALTH AND DISEASE.

THE

# PHILOSOPHY OF THE BATH;

OR,

## AIR AND WATER

IN

## HEALTH AND DISEASE:

CONTAINING A

HISTORY OF HYDRO-THERAPEUTICS, AND OF THE HOT-AIR
BATH FROM THE EARLIEST AGES, WITH AN
INTRODUCTORY CHAPTER ILLUSTRATIVE
OF THE PRESENT CONDITION OF
THE MEDICAL PROFESSION.

BIBLIOTHECA·BODLEIANA

BY

DURHAM DUNLOP, M.R.I.A.

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"*Non est vivere, sed valere vita.*"—MARTIAL.

"*He hath abandoned his Physicians, Madam, under whose practices he hath persecuted time with hope, and finds no other advantage in the process, but only the losing of hope by time.*"—SHAKESPERE.

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# PREFACE.

THIS work originated in a series of papers contributed by the writer to a public journal with which he was connected. They excited some attention at the time, and it was suggested that, if revised and published in a separate form, they might aid in diffusing a more correct knowledge of the Bath than generally prevails.

It was found, however, that, to do anything like justice to the subject, considerable additions were required, which involved the re-casting of the whole matter; and thus, what was at first intended to be a small pamphlet, gradually expanded into the present volume.

The indifference of the Medical Profession, as a body, to the employment of Heat as a Therapeutic, and the prejudiced hostility with which the Bath has been received by the great majority of practitioners, led to the addition of the Introductory Chapter, and also of Chapter XIV., for the purpose of illustrating the value properly attachable to such opposition, no matter how authoritatively expressed, and of showing that anything new is not necessarily false or useless because it may be ridiculed and repudiated by medical men of the highest public repute. Great professional eminence, in the estimation of the world; is quite compatible with the harbouring of inveterate prejudices, and the existence of even gross ignorance on strictly professional subjects.

It is only necessary to observe that, in describing the condition of the medical profession and the deplorable effects of drug practice, the authorities relied on are members of that profession who hold, or have held, high position in its ranks. Nothing has been advanced save on such authority, and, considering the whole character of the evidence adduced, it is for rational minds to estimate the credit due to medical opinion, when dogmatically expressed, in opposition to the natural system of Therapeutics advocated in these pages. In medical practice, as in all other social ameliorations, public intelligence must lead the way.

# TO RICHARD BARTER, M.R.C.S.E.

DEAR DR. BARTER,

The high sense I entertain of your distinguished labours in a cause which has for its object the prolongation of human life, the mitigation of suffering, and the increase of health and happiness, leads me to dedicate to you this humble effort to direct public attention, in the words of Sir John Forbes, to "the great value and importance of what may be termed the physiological, hygienic, or natural system of curing diseases, in contradistinction to the pharmaceutical or empirical drug plan, generally prevalent."

In common with all who are familiar with the facts, I recognise in you the earnest, intrepid, and successful innovator, who, with the truths of Nature for your guide, succeeded in introducing a new system of Therapeutics, which some of the most gifted minds of the age, who adorn the medical profession, have welcomed as a priceless "boon to humanity."

To you the honour justly belongs of having been the first to establish, on a firm basis, Hydropathy in Ireland, and to you also the Western nations are indebted for the revival of the ancient Hot Air Bath, and its application as a remedial agent in the treatment of disease—thereby demonstrating the incomparable advantages of artificial Heat as a curative means. You thus conferred on Hydropathy a new power which constitutes its perfection as a rational system of Therapeutics—vastly augmenting its utility and intensifying its benefits.

Having been led, in the first instance, to follow the imperfect modern Turkish mode of constructing and working the Bath, your sagacious experience soon induced you to detect and correct the evils arising therefrom. You restored the purity of the Bath atmosphere in accordance with the more approved ancient practice, and thus avoiding the inconveniences of superabundant moisture, you instructed the Easterns to appreciate the curative powers of the Bath, and indicated the only means by which high degrees of Temperature can be safely and beneficially employed.

Feeling your way with prudent circumspection, and profiting by your large experience, you gradually tested the value of high temperatures and the direct action of Heat in the treatment of disease, thus heralding the development of a therapeutical agency which is destined to revolutionise the unphilosophical system of Old Medicine, and supersede the gratuitous cruelties of its irrational practices.

When satisfied you possessed in the Bath a remedial agency of superlative power as applicable to man, your humanity suggested the sound physiological conclusion that it would prove of equal potency in the treatment of the various diseases to which domesticated animals are subject, and experience has amply confirmed the correctness of your views.

Undeterred by the opposition which besets the path of every one who earnestly labours for the benefit of mankind, you have had the satisfaction of seeing your views adopted, or tacitly acquiesced in, by many of those who were foremost to ridicule or senselessly condemn. "Of all methods of advancing the interests of science," remarks Dr. Andrew Combe, "that which consists in the supercilious neglect of alleged new discoveries, merely on the ground that they differ from what is already known, is assuredly the worst." And he further observes—"We ought to extend the hand of welcome to every man who is able to correct an established error, or add a new truth to the existing store; and much more so, if the offered contribution should be of that new and important principle capable, if true, of modifying and improving the whole field of medical practice."

That your "contributions" merit such a character is now admitted by all who judge impartially; yet no such "hand of welcome" was extended to you by the great majority of your professional brethren. On the contrary, you experienced the fate of all great practical benefactors of mankind in having your labours misrepresented—your motives impugned—your claims to distinction unfairly questioned, and the merits of your improvements ungenerously decried and depreciated.

But you have, nevertheless, enjoyed the signal triumph of having lived to witness the successful establishment of the Bath not only in Western Europe, but also in America and other countries, where it was previously unknown, and future generations cannot fail to recognise your merits as a distinguished pioneer in the cause of human welfare.

With disinterested zeal you have devoted much time and money to extend the benefits of the Bath among the poor. More especially you have been earnest in your exertions to have the Bath made available for the treatment of the helpless sick in our Hospitals, Asylums, and Workhouses. Your endeavours, in this respect, entitle you to the gratitude of the humane; and though, from the apathy of those in authority, your exertions have only been as yet partially successful, it is to be hoped a more enlightened and Christian policy will soon prevail.

In writing on the subject of the Bath, I have felt it was but a simple act of justice to truthfully record the greatness of the obligations the cause of humanity is under to you, and I only express the feelings of all who rightly appreciate the value of your labours in hoping you may long continue to enjoy the elevated position you have so worthily won.

With sincere respect,

I am yours, faithfully,

DURHAM DUNLOP.

SPAFIELD, Holywood, August, 1868.

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# INTRODUCTORY CHAPTER.

SECTION I.—*The case stated—Health, bodily and mental, its importance—ignorance of "Educated classes" concerning the science of life a main cause of Medical Empiricism.*

THE object of this work is to place before the public, in a comprehensive and popular form, the evidence furnished by Science and Experience respecting the employment of Air and Water—under certain conditions—in the preservation of Health, as well as in the Hydropathic treatment of Disease. No new principle is announced; no novel theory propounded; support is claimed for no speculative system—on the contrary, the only desire is to bring in simple detail before the public what has been known, though imperfectly practised, for thousands of years, in every quarter of the globe, but which in our own day, despite various discouragements, has happily received scientific and practical development.

Air and water are natural elements indispensable to the existence of animal life. It is not surprising, therefore, that, when modified, in a greater or less degree, by another natural element, temperature, they should become the most general and powerful, the most salutary and unfailing agents yet discovered for the sustentation of normal life, and the correction or alleviation of those numerous derangements to which it is exposed.

Normal life is Health; and what subject, rightly considered, is fraught with more vital import to thoughtful minds than the consideration of the most effectual means by which Health can be preserved? "The first wealth is Health"—it is the richest inheritance with which man can be endowed, for success in life, to say nothing of the rational enjoyments of existence, is mainly dependent on its possession. As Cowley says, it is—

> "The salt of Life, which does to all a relish give;
> Its standing pleasure, and intrinsic wealth,
> The body's virtue, and the soul's good fortune."

Surely, then, whatever tends to sustain or confer so great a blessing as Health, ought to possess a primary value in the estimation of every intelligent being. The *mens sana in corpore sano* of Juvenal, has been not inaptly termed "the golden rule of education;" but a sound mind, as a general rule, is only coexistent with a sound bodily condition. Physical health is physiologically necessary to perfect mental health, and this incontestible truth ought never to be lost sight of, for, as Dr. Millingen observes, "the sound operation of the mind is frequently disturbed by the slightest physical influence."* Two schools of medicine, famous in their day, were distinguished by opposite views on this subject. Stahl, the founder of one, contended that bodily disease principally proceeds from affections of the mind, while Hoffman, the founder of the other, maintained that the primary cause of all disease is referrible to the body. A more enlightened Physiology, however, now admits that there is much truth in both theories, and has established the existence of a reciprocity of action between the mental and the physical, which is an inflexible law of our economy—the effects of which are not speculative but demonstrative, though *how* the mysterious relationship exists and acts is inscrutable and inexplicable.

It is sufficient for all practical purposes to know that such a relationship does exist, and that Health is governed by certain laws which are, in the main, well-defined and easily understood. This being the case, it follows that there is a moral obligation on every one, who has intelligence and opportunity, to become acquainted with these laws and live in obedience to them. "Knowledge is power," and he who comprehends how "fearfully and wonderfully" he is made—how admirably his organism is designed to fulfil its purposes, but how necessarily a breach of the laws which govern it must be followed by disease in one form or other, is surely better fitted to appreciate aright the inestimable blessing of Health, and guard against Disease, than any one can be who is content to remain purblind and ignorant on the subject? "Know thyself" is an ancient and wise maxim, which comprehends a philosophy that lies at the root of human happiness and well-being.

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* Millingen. *The Passions, or Mind and Matter*, p. 150.

Next in importance to a knowledge of the means by which Health can best be preserved, is an acquaintance with those simple and natural agencies by the judicious application of which deviations from the healthy standard can be corrected, and the balance of disordered functions re-adjusted and restored. This knowledge, however, few persons care to acquire—the mass even of the "educated classes" being content to remain ignorant of those general physiological laws which are the foundation of all that is rational in Medicine—of all that has solid pretensions to rank as Hygienic, Prophylactic, and Therapeutic—that is, of all which can be truly deemed preservative of Health, or possessed of remedial properties in relation to the numerous derangements to which our artificial habits of life render us more or less liable.

It is within the scope of every one's observation that, on such subjects, deplorable ignorance and apparent indifference prevail. How few are to be found who have rational ideas respecting their own organism—who understand even the language of Physiology, or could satisfactorily answer the questions—What is Health? What is Disease? It is, in truth, unduly complimentary to speak of an "educated laity" in relation to this subject, because, in reality, ignorance and not knowledge is the prevailing rule. Pope says—

"The proper study of mankind is man."

Yet, what passes current in society for an "accomplished education," embraces at least a smattering of almost every subject save a knowledge of man—of his organism, its functions, and the laws that govern them. This knowledge is foolishly considered as "technical," or "professional," and hence the "educated classes" are specially excluded from instruction in those immutable laws of Vitality, on the observance of which much of their well-being in after-life is largely dependent. This admitted defect in our general educational curriculum sadly tends to foster the superstitions and impositions which have for ages existed in relation to the alleged curative effect of Drugs, and in this way becomes the source of an incalculable amount of human misery. The errors of one generation are thus transmitted as a baneful inheritance to another, and inveterate prejudices are perpetuated to stifle the voice of nature and of truth.

If the so-called "educated classes" really possessed such easily-acquired knowledge as I have referred to, it is not possible to believe that the vocation of *Quackery*—whether orthodox or heterodox, legitimate or illegitimate, licensed or unlicensed—would continue to be the prosperous business it has always proved, and never more so than in our own time. Because it is owing to the ignorance and consequent credulity of mankind that quackery in Medicine finds profitable existence. "Man," observes Southey, "is a dupeable animal. Quacks in medicine, quacks in religion, and quacks in politics know this, and act upon that knowledge."* Quacks in religion and polities are confessedly bad enough, but there are always corrective influences more or less powerfully at work to counteract their mischief. Whereas quacks in medicine labour in a field peculiarly their own. They appeal to the ignorance of their patients, and act on the infirmities of human nature when their seductive devices have greatest potency—when the body is suffering from the torments of disease, and the intellect is obscured by apprehensions of fatal consequences, and hence the remarkable success which has attended empiricism, even among the best educated, in all ages.

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* Popularly the term *quack*, as relates to medicine, is applied to a licensed or unlicensed practitioner who trades in *panaceas* or *specifics*, but in a more general and correct sense it is applicable to *all practitioners*, who pretend to skill and power in the treatment of disease which they do not possess. In this sense quackery, or empiricism, abounds in all Medical Schools, and it is by its artful use that popular and fashionable practitioners generally obtain reputation, and thrive at the expense of their dupes. Hence the great success of notorious quacks, who openly trade as such, has been ascribed to the doubtful practices of the regular physicians. An educated public can alone correct this great evil. All false pretence is quackery, no matter how disguised, and *Drug Medication*, whether ignorantly or designedly followed, is essentially a false pretence.

It would be difficult indeed, to determine at what precise point in our own day Medical quackery commences or terminates. That it pervades every branch of Medical practice is only what is acknowledged and lamented by many of the most learned, accomplished, and truthful members of the Profession. But it must not be expected that any desirable extent of improvement, in this respect, will emanate from within the Profession itself, for those who profit by abuses were never yet known to voluntarily correct them. This a candid writer, Dr. C. Kidd, admits, and says, "Our chiefest hopes at present exist in the outer educated public. It is a sad but humiliating confession."* As an eminent American author, Silvester Graham, observes:—

> "It is certain that without a well-educated Medical Profession, *of high moral tone*, society cannot prosper; and it is equally certain that such a profession will be most accurately estimated where society is most intelligent in regard to the proper qualifications of such a profession; and, therefore, the most certain means of destroying every species of medical empiricism and imposture, and of securing the highest confidence in a responsible profession, *is to enlighten the people in the knowledge of the Laws of Life and Health.*" †

A public so enlightened would not be retained long in the bondage of Drug superstitions, nor be deterred, by the mere *ipse dixit* of ignorance, prejudice, and selfish interests from adopting remedial agencies in accordance with nature and reason. But there is not yet such a general diffusion of enlightenment, even among the highly favoured classes, as would warrant the belief that the reign of medical error and imposture will speedily terminate. There is now, unfortunately, as much *inertiæ* to overcome—as much active hostility to be encountered in introducing new and well-attested improvements into the profession and practice of Medicine, as at any former period of its history. This is mainly attributable to the non-enlightenment of the public generally on matters relating to Medicine, the effect of which is to cherish and perpetuate inherited delusions concerning the nature and action of Drugs, which render all improvements impossible, for most assuredly it is from an intelligent public that the irresistible stimulus to improvement and progress must come.

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* *Medical Times*, Sept. 9, 1865.

† Science of Human Life—*Preface.*

But in order to comprehend clearly the various agencies which now contribute so powerfully to the maintenance of error, by forming artificial barriers against the introduction of improvements—agencies by which medical men are fortified in clinging to the superstitious and admitted imperfections of Drug-systems, and impelled to resist salutary innovations directed to the establishment of the Healing Art on a rational and scientific basis—it is necessary to candidly examine the state of the Medical Profession as it now exists, and in doing so reliance can be most satisfactorily reposed in the conscientious expression of opinion by Medical men themselves. All the conclusions arrived at will, therefore, be fully sustained by an abundance of unquestionable professional authorities.

### SECTION II.—*Opposition of the Medical Profession to New Truths—The Priest-Physicians of the Pagans and Christians—Hippocrates—Division of Medicine into Surgery, Physic, and Pharmacy, a great source of corruption and evil—Medical Knowledge—its constituent parts, Anatomy, Physiology, Pathology, Hygiene, and Therapeutics—Distinction between Medicine as a Science, and the mere Art of Physic—Opinions of Medical authorities thereon.*

THE History of Medicine proves that medical men, as a class, have always been identified with opposition to new and improving truths. In all ages they have been discreditably distinguished for upholding, with minds impervious to reason, whatever established opinion ruled among them, no matter what superstitions or corruptions that opinion involved and sustained. A devotion to ignorant credulities and irrational preconceptions, with an intolerance of any appeal to nature in opposition to speculative conjectures however absurd, has been a decided and prominent characteristic of the Profession from a remote antiquity. Unfortunately the same characteristic is still remarkable, though not now so glaringly and offensively displayed.

In the first ages of the world the practice of medicine was usurped by the Priests, to increase their influence and authority over the minds of the people. Hence, it was early involved in the grossness of superstition, and its practice was debased by the artifices of empirical pretenders to supernatural gifts. Hippocrates, who was born about 460 B.C., and educated under the Priests of the Temple of Æsculapius at Cos, was the first who sought to divorce medicine from Priestcraft, and partially succeeded in doing so. His name, considering the age in which he lived, is the most illustrious in medical history, and he is justly styled "The Father of Medicine."

The great doctrine inculcated by the Priest-Physicians concerning disease was, that all bodily and mental infirmities proceeded from some supernatural agency, and therefore relief was only to be obtained through their intervention, as they alone held communion with the gods! Hippocrates taught that disease was not caused by the gods at all, and, therefore, that the rites, ceremonies, invocations, and mummeries of priestcraft, were not required to propitiate offended deities, but that each disease had its own natural cause, and was to be relieved only by natural means. Hippocrates was, of course, violently opposed, misrepresented, and calumniated by the practitioners who profited by the superstitious ignorance he desired to dissipate, just as every honest and truthful innovator has experienced similar treatment down to the present time.

About 200 B.C. medicine was first divided into three separate departments—Surgery, Physic, and Pharmacy—and this division has been the principal cause of the corruption and degradation that has attended its practice and characterised its history from that day to this. After the establishment of Christianity under Constantine, the primitive purity of the Church speedily vanished, and actuated by similar motives as their Pagan predecessors, the Christian priests usurped the province of medicine and sought to monopolise its practice. Consequently, nature was soon banished from medical teaching and practice, while irrational doctrines and gross superstitions supplied its place. Benighted dupes, labouring under disease, were instructed to rely on the miraculous intervention of some fabulous saint, or on the alleged curative influence of some imaginary relic, until it became a prevailing belief all over Europe for ages, that by such preposterous means disease could be absolutely charmed away.

Priest-Physicians never attempted the cultivation of medicine by rational study, nor to follow its practice by natural means. They were for the most part grossly illiterate, and encouraged the superstitions which led the practice of Anatomy to be regarded with abhorrence. About the middle of the twelfth century the clergy were prohibited from practising surgery, or performing any operation that required the "drawing of blood," on the pretext that "the Church abhors the shedding of blood." From this date Physic and Surgery, which were before theoretically separated, became practically distinct professions, and have remained so to the present day—the Priests retained possession of the former till the sixteenth century, while the practice of the latter fell into the hands of barbers, cobblers, tinkers, and such like.

After the great political and social revolution of the sixteenth century the study of Medicine began to revive, but the mischievous distinction between Physic and Surgery was still maintained, and became permanent. The Physicians obtained a disastrous ascendancy in England before the Reformation under Henry VIII., having, through their influence with Cardinal Wolsey, procured a charter of incorporation and a monopoly of practice in 1518. They thus became chained, as it were, to Drug superstitions, with all the cruel and destructive practices they involved, and still remain in the same degrading bondage. Drug dealing gradually expanded into a thriving trade in the hands of Apothecaries, who also succeeded in obtaining a separate charter of incorporation in 1617. Thus Doctors and Drugs became established institutions. They obtained a disastrous pre-eminence—prospering on the ignorance and credulity of mankind. Content so to trade, they never dreamed of cultivating Medicine as a Science, nor of seeking in nature for the means of alleviating disease, but were always active in crying down, with persistent intolerance, all discoveries that exposed their own deplorable ignorance, and promised to be a benefit to mankind.

When it is complained, therefore, that Medicine, as a healing art, has made little or no progress since the days of Hippocrates, it must be remembered that the three-fold division of the Profession was totally adverse to progress. Modern Physicians inherited all the superstitious absurdities and ignorant prejudices of the middle ages, and as the degrading credulity that attached supernatural agencies to charms, phylacteries, talismans, and relics, gradually died out with the belief in the Philosopher's stone, the *elixir vitæ*, vampires, and witches, the famishing ignorance of mankind sought food for its mental depravity in the delusions of Drug Medication. Physicians and Apothecaries had a paramount interest in favouring such credulities, and no desire to see Medicine cultivated as a Science. Changes, it is true, have taken place in medical practice, but it has been from one destructive Drug system to another equally delusive and fatal. Faith in Drugs was, and still is, the guiding principle of the Physician's practice, while natural and salutary agents are despised as frivolous, and represented as useless or pernicious to their ignorant patients.

Besides, Surgery for long ages was treated as a vile and despised mechanical art, and as such its exercise was in complete subserviency to the authority of ignorant Physicians, totally unacquainted with the organs and laws of the human economy, while without the cultivation of surgery as a science no advance was possible in medical knowledge or practice. After a long and arduous struggle surgery did slowly emerge from the depravity in which it was steeped, but it was not till the commencement of the present century that the surgeons were incorporated in London on their present foundation—nearly three centuries after the Physicians, so great a start had empiricism.

Hence it is that all the inherited evils connected with medical practice still flourish among us, and that surgery is only now assuming its proper position—under many retarding influences still—as alone identified with the true science of medicine.*

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* The division of the Profession, and the competition of the Licensing Corporations for students and fees necessarily exercise a lowering influence on surgical qualifications, because where all diplomas, degrees, and licences to practice are of equal rank and value on the Register, a minimum of general and professional education must prevail. Should Colleges of Surgeons insist on a high standard of education and qualification their halls would soon be deserted; in self-defence therefore, under the wretched system that prevails, they must regulate their standards *by the lowest* to compete

Hence also, the deplorable ignorance that generally prevails among the public concerning the profession and practice of medicine. Presumptuous pretensions, without a shadow of reality to rest upon, continue to impose on the ignorant and credulous. Thus a system of delusion is perpetuated which renders improvement difficult and tedious, while it is pregnant with incalculable evil to society. Medicine passes current as a science, and in popular acceptation is identical with Physic. Is then "Physic" a science? So, indeed, Physicians would have the world believe, but let us lift the veil and look at things as they really exist.

*Anatomy*, says Richerand, is "the science of organization."* "It deals with the apparatus, the instruments in that laboratory in which the chemistry of life is carried on."† Hence the peculiar province of Anatomy is the examination by dissection of the organs of animal life. "Strictly speaking, structure alone is learned by dissection; the vital properties of organic textures, and the functions of organs, are found out by observation."‡ Anatomy, therefore, has a solid foundation, and is truly a science of *facts*. Consequently, it is the only basis on which sound medical knowledge can rest.

*Surgery*, in the narrow barbaric sense that prevailed in ages of ignorance, means hand work, and implies the employment of instruments, and the use of topical remedies merely, in the treatment of disease. Such was the ignoble sphere assigned to Surgery during the dark ages of semi-civilization, extending even to the end of the eighteenth century. Its proper sphere will be noticed in due course; at present it is sufficient to ob-

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at all successfully. In this way many practitioners figure on the Register as surgeons who are deplorably ignorant of Surgical Science, and Apothecaries, for the most part, duly qualify themselves for general practice by obtaining a surgical diploma!

* Elements of Physiology, Copeland's ed. *Prelim. Dis.*

† Surgical Commentaries, by G. Macilwaine, in *Medical Press and Circular*, July 10, 1867.

‡ Lectures on Comparative Anatomy, &c., by Sir William Lawrence. Seventh ed., p. 44.

serve that, while it is based on a thorough knowledge of Anatomy, general and morbid, it also draws inspiration from whatever tends to throw light on the varied and complicated functions of Vitality. It was by thus estimating aright the true province of Surgery, that the illustrious John Hunter succeeded in raising it "above the servility of a mechanical art, to a science of the highest order."

*Physiology* is the science of normal or healthy life, and has an intimate alliance with, or rather a necessary dependence on, Anatomy, inasmuch as it deals with the whole phenomena of our organism in its natural state, and with the laws or principles in accordance with which they are manifested, and by which all the functions of structure are governed. Physiology, consequently, has no practical value outside the domain of fact. It has nothing to do with speculative fancies, and it never can err while it keeps within the sphere of legitimate induction from the incontestible phenomena of nature.

*Pathology* is exactly the reverse of Physiology. It embraces the phenomena of abnormal or diseased conditions, and, therefore, is largely dependent on morbid Anatomy. Skill in *diagnoses*, or in the art of discerning the distinctions of disease, can only be acquired as the result of observation based on a profound knowledge of Pathology, and the reason why so many fatal mistakes are constantly occurring in practice—misjudging effects for causes, and treating symptoms only, instead of comprehending the true source of abnormal changes, is, that a lamentable ignorance of Pathology is a characteristic of medical practitioners generally.

*Hygiene*, or the art of preserving health, it will thus be seen, is necessarily based on a correct knowledge of Physiology. A knowledge of the laws by which normal or healthy life is governed, necessarily makes us acquainted with the conditions essential to its maintenance, while we are also led to comprehend how the violations of those conditions cause a disturbance of natural action, which, when manifested in whatever form, or with greater or lesser intensity, constitutes what is commonly termed *disease*. Hygiene, therefore, rightly understood in a truly comprehensive sense, includes mind and body, and thus in reality, embraces Biology, or the Science of Life.

*Therapeutics* is opposed to Hygiene in so far as it contemplates the *derangements* of natural health. Its perfection consists in properly treating abnormal conditions—in checking the aberrations of disordered functions, and in contributing towards the restoration of natural action. Its chief duty consequently is to aid the *vis medicatrix naturæ*, or the principle of self-preservation with which Providence has beneficially endowed all organised creation. The *Healing Art*, as it is called, is, therefore, only another name for Therapeutics, but, correctly speaking, "art" never yet healed or cured any disease, while the supposition, absurd and unscientific, that "art" does heal or cure, has been, and still continues to be, a most fruitful source of error and suffering. All mere "art" can do, at best, though sustained by the most profound medical knowledge, is to remove foreign elements that interfere with normal action, and supply natural aids that may be wanting, and thus assist to re-establish those conditions which sound physiology teaches are essential to health—the *vis medicatrix naturæ*, the preservative principle of animal life, *alone* heals and cures.*

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* Hence a rational system of Therapeutics can never be based on what is, in any degree, *speculative*, but must necessarily rest on a knowledge of *facts* obtained by the study of Physiology, and accurate observation of the varied phenomena of Nature as manifested in health and disease. Just as the most profound knowledge of Anatomy, though the basis of Surgery, never yet, of itself, made a skilful and accomplished surgeon, so an equally profound knowledge of Pathology, or of diseased conditions, never yet made, of itself, a skilful Therapeutist. The essential condition is, that all *theory* must be discarded, and Pathological knowledge applied *in strict consistency with Physiological truth.* This strikes at the very root of all systems of mere Physic which have tortured humanity, because all have been based on speculative and unstable theory—not on the facts of nature. Hence a Physician may be, and often is, a very learned Pathologist, very skilful in Diagnoses, and yet, *as a practitioner*, nothing more than the servile follower of some empirical mode of treatment—the dupe himself, and unconsciously so often, of false doctrines, erroneous teaching, and imperfect mental training.

This makes up the sum total of all that can be deemed *absolutely scientific* and *certain* in Medicine, and it will be observed that all this knowledge is essentially knowledge of *facts* derived from the diligent observation and study of Nature, consequently has no relation whatever with anything that is merely theoretical, speculative, or problematical. Thus considered, what then becomes of the popular idea concerning Medicine and the Medical Profession? Where is the place for the mere Physician to occupy who deals in drugs? What scientific, natural, and rational basis has he to rest on as a practitioner?

Eliminate Anatomy, Physiology, and Pathology from what —among the ill-informed and unreflective of all classes—passes for "Medical Science," and honestly consider what remains behind. What, indeed, but the Apothecary under the designation of a "Physician," with his pestle and mortar, still and crucible, for the preparation of pernicious compounds—unnatural and poisonous concoctions, recommended, unchallenged and unexplained, by crude theories and speculative fallacies unworthy of this scientific age, and all at eternal enmity with human health, happiness, and life!

Is there then a *Science of Medicine?* Yes, and—No! Yes! as regards the demonstrative facts, and philosophic inductions therefrom, of Anatomy, Physiology, Pathology, and their derivatives or branches, but, absolutely, No—as regards Medicine considered as the mere *art of Physic* followed by the Physician. In this sense Medicine is not, and never will be, a science, for it has no foundation in nature or truth. It is, therefore, exceedingly inexact, and greatly conducive to error, to use the term "Medicine" as synonymous with "Physic." Medical men are so prone to indulge in loose, hazy, and illogical writing, that even the *Lancet* confesses—"In no assemblage for discussion do we meet with such proof of *utter want of logical discipline of the mind,* as at our Medical Societies."*
And the observation applies with great truth and force to medical literature generally.

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* *Lancet,* Feb. 19, 1853.

Bearing in mind then the essential distinction between Medicine as a *science* and Physic as an *art*, it will be understood, at once, that it was not the former—as based on the demonstrative facts of Anatomy, Physiology, and Pathology—that the eminent Sir Astley Cooper contemplated, when he deliberately said—"The science of medicine is *founded on conjecture*, and *improved by murder!*" It was clearly physic, or drug medication, that he referred to.

It was also of medicine, as identified with the pernicious art of drugging, that the celebrated Magendie spoke when addressing his students, he said—"Gentlemen, medicine is a *great humbug*. I know it is called science. Science, indeed! *It is nothing like science.* Doctors are merely *empirics* when they are not charlatans!"

In the same spirit of candour the *Dublin Medical Journal* said—"Assuredly the uncertain and most unsatisfactory *art* that we call medical science is *no science at all*, but a jumble of *inconsistent opinions;* of conclusions hastily and often inaccurately drawn; of facts misunderstood or perverted; of comparisons without analogy; of hypotheses without reason, and theories not only useless, but *dangerous*."

In even more emphatic terms an esteemed author, Dr. Mason Good, wrote—"The science of medicine is a *barbarous jargon*, and the effects of our medicines on the human system in the *highest degree uncertain*, except, indeed, that they have *destroyed more lives* than *war, pestilence*, and *famine combined!*"

There can be nothing *uncertain* in science, and hence the *Medical Times* admitted that "a *scientific*, as distinguished from an *empirical* treatment of disease (by drugs) is an *idle dream!*" * And the reason of this may be gathered from the clever author of *Ourselves, Our Food, and Our Physic*, Dr. Ridge, who frankly says—"That medicines, administered with the *best intentions*, and according to all *rules of art* by the profession itself, as well as by all classes on their own responsibility, *aggravate the disease*

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* When this was published, Feb. 7, 1863, the *Medical Times* was not incorporated, as it now is, with the *Medical Gazette*.

*and suffering*, is too clear to need any illustration." Even the *Lancet* has had its faith shaken in "Physic as a science." "The progress of *true* medical science has greatly qualified our estimate of the value of *mere drugs* in the treatment of disease. It has shown that in medicine, as in politics, the *best course* is often that of *non-intervention*."*

The conclusion is, therefore, irresistible—that Anatomy, Physiology, and Pathology, as based on demonstrative facts, can alone be regarded as composing medical science. Hence an eminent authority, Sir Richard Owen, Professor of Anatomy to the Royal College of Surgeons, London, in addressing the students of St. Mary's Hospital, Paddington, at the distribution of prizes in 1865, said—"Anatomy, Physiology, and Pathology, all three bodies of doctrine worthy of the name of sciences, must be cultivated—if possible mastered—as the *indespensablē basis* on which a lasting superstructure of a true science of medicine can be raised."

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### SECTION III.—*Popular belief respecting Medical qualifications—Facts concerning present condition of the Medical profession—The Medical Act of 1858—The General Council: its defective administration—Deplorable condition of Medical Education—The Licensing bodies—Their numerous licenses and titles rejected by Army and Navy as no test of qualification—Opinions of Medical authorities on shameful state of the Profession, and destructive character of Medical practice.*

BEARING in mind the essential distinction we have established between Medicine as a Science, and the mere practice of Physic, a more correct appreciation and sounder judgment can be formed concerning the condition of the Medical Profession as it now exists. It is a popular belief that any one who ranks as a member of the Medical Profession must necessarily be learned and wise, accomplished and skilful. Popular credulity, indeed, runs so wild, in ignorance of the laws of nature, as to believe that "Doctor" is a name to conjure with—that "M.D.," or half the letters of the alphabet appended to a practitioner's name, has some mysterious signification, and betokens a wizard's power to charm away disease and restore health!

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* *Medical Annotations in Lancet*, March 21, 1865.

The public willingly assume the existence of learning and ability. They take it for granted that a proper education has been received by all "regular" practitioners. They repose confidence in all diplomas, licenses, and degrees, which are supposed to have been acquired by an enlightened course of study, and after thorough competency has been honestly tested by impartial examination. They do not believe that very ill-informed persons can easily become, and, *as a rule*, actually do become, "M.D.'s"—obtain diplomas—are licensed to practice, and have their names emblazoned on the Registry as "duly qualified." They do not consider it credible that a scandal so grave could possibly exist, as entrusting to persons of acknowledged and notorious incompetency the serious concerns of life and health. Let us, however, again lift the veil, and look at facts as they glare before us.

The shameful admission first attracts attention, that the standard of Medical Education is so wretchedly low as to admit persons to the ranks of the Profession who do not possess even the ordinary qualification of a *respectable English education!* —who are incapable of writing a Latin prescription correctly! The evils that arose within the profession from such a scandalous state of affairs led to the passing of the Medical Act, 21 and 22 Vic., c. 90, in the hope that some improvement might be effected. But in every particular this Act is lamentably defective. It did not honestly grapple with the evils that lie at the root of the whole medical organization. It did not touch one of the manifold abuses that pervade the whole system ofmedical matriculation, education, examination, and licensing. On the contrary, it sanctioned and fortified them all.

A General Medical Council was established, but its very composition precluded all hope of effective reform. It consisted of seventeen persons, elected by nineteen medical corporations, possessing licensing privileges, and all having mercenary interests in existing abuses. *Six* members are nominated by the Crown, so that assuming they are all anxious for improvement, there are *seventeen* against them. A Register is provided for, and no practitioner not registered is entitled to recover at law any charges whatever for his services, or to hold any appointment in the Army, Navy, or Civil Service. The authority conferred on the Council it has refused to exercise beneficially. Among its first acts was to dispense with a knowledge of Greek as unnecessary to form any part of the education of a learned and accomplished medical practitioner! In short, the conclusion now arrived at by the enlightened among the Profession itself, after an experience of ten years' working, is, that the whole Act, as administered by the General Council, is a pretentious deception—a solemn burlesque, and an expensive sham! Some little zeal has been displayed, it is true, in seeking to extinguish empiricism outside the registered practitioners, but no attempt has been made to effectively strike at the root of the equally gross abuses which exist and flourish within the charmed circle.

For instance, there exists *nineteen* separate and independent licensing bodies in the United Kingdom, empowered to confer no less than *thirty* separate licenses to practice, and *fifty-four* titles, which the Council is compelled to register without having any authority to test the *qualifications* of those who possess them. There is not, as there ought to be, *one uniform standard* of education for all students—*one examination* to which all should submit, and *one* title to practice which all should possess; but each of the *nineteen* licensing bodies is left to consult its own mercenary interests in admitting whom they please, and on whatever terms they please.

The consequence is, that unhealthy competition is encouraged, and as most students will go through whatever curriculum is shortest—will patronise that board of examiners whose examination is lowest, easiest, and cheapest, the inevitable tendency is to degrade professional education to the very lowest level.

Nor is this all. In many instances the Examiners are paid according to the *number* of students they pass, and hence their self-interest is adverse to upholding a high standard of education, which can alone reflect credit on the Profession, and properly qualify Practitioners for the service of the public. On the contrary, they are prompted to strain points to pass as many candidates as possible, no matter how wretchedly qualified they may be—sending them forth licensed to commit manslaughter with impunity. Medical practitioners are just what they are educated to be, as a rule, neither better nor worse than the average of other men who earn their bread by following a vocation. The vices of their practice, therefore, may be considered not so much those of the individuals, as of the pernicious system that fosters incompetency, and legally recognises it as "duly qualified."

It is somewhat remarkable that individual members of the General Medical Council have been among the most emphatic in lamenting the present degraded state of the Profession as regards intellectual capacity, educational attainments, and professional knowledge. The President, in his opening address at the annual meeting of the Council, May 29, 1867, said—"If our profession, as a whole, is still to bear the name of, and be regarded as, one of *the learned* professions, then, undoubtedly, those who enter upon it *ought* to have received that amount of mental culture, and *ought* to be capable of passing a preliminary examination *on subjects of general education,* which shall at any rate be equivalent to the examinations which are passed by those who are entering upon the clerical profession, by those who are entering upon the legal profession, the army, and civil service of the country." No one is likely to dispute this, yet it is notorious that the profession swarms with members who are shamefully illiterate—whose opinions on any subject of general literature or of science, are wholly undeserving of respect.

Dr. Alexander Wood, a member of the Council, at the meeting, May 30, declared: "It is a matter of notoriety, that many students are allowed to enter upon the studies of their profession with an amount of education that would be *notoriously disgraceful* even to pupil teachers in schools. I have no hesitation in saying, that even in spelling and English composition they are *not fit to stand upon the same platform with the pupil teachers of the village schools of Scotland. Now, I say this is a disgraceful state of matters.*"

Sir Dominic Corrigan, at the same meeting, said: "I, myself, within the last three weeks, have known an instance of candidates going from one licensing body to another, and obtaining a licence without being able to write Latin or Greek." Yet the medical is called a "learned" profession, and prescriptions are presumed to be written in a sort of hieroglyphic Latin!

Professor Bennett, of Edinburgh, as quoted by Dr. Acland, a member of the council, at the meeting, June 3, says: "That in a profession, such as that of medicine, there should exist, not only in the same country, but in the same city, various examining boards, so managed that the candidate who is incapable of passing one can rush to another with almost the certainty of obtaining his licence, *is a scandal* to the community such as should be abolished." "This opinion," remarks Dr. Acland, "is not singular, and it is not original, but it is just, it is very pregnant, and it is to the point."

In an address to the British Medical Association, at the annual meeting held in Dublin, August, 1867, Sir Dominic Corrigan made some strange disclosures. He said, that "under the present system, young men get into our profession who *could not pass an examination for the place of a letter carrier!*" Again—"it is notorious that students know as well in regard to their diplomas, as buyers do in regard to the articles of purchase, where they will get what they want on *the easiest terms;* they go there, and become the possessors of what they want—diplomas, it matters not good or bad, for the legal brand in the form of a registry declares, under Act of Parliament, that *all are equal.*" And again—"It is notorious, that in both Germany and America there are Universities that *sell their diplomas* just as they sell beer or Indian corn, to all *who can afford to pay for them.*"* It is equally notorious that they are bought by British practitioners, and that after all they are not a less certain test of merit than the great bulk of the *thirty* licenses, and fifty-four titles to practice which are as notoriously *sold* by the *nineteen* licensing bodies of the United Kingdom.

The Professor of Surgery in Dublin University, Mr. R. Smith, in his address at the same meeting, complained of "the almost *systematic neglect* upon the part of the junior members of the profession of the writings of the surgeons of the past generation." He further said: "From my long experience as a lecturer, and as an examiner, I have no hesitation in saying that not *one* student in *a hundred* ever reads the writings of Pott, of Hey, of Abernethy, of the Bells, the Monroes, of Colles, and a crowd of other master minds that have stamped their fame upon the history of surgery."* But is this not the fault of the avaricious Licensing Bodies, who care nothing about the proper education and qualification of students, in comparison with their own mercenary interests? If the profession is so deplorably illiterate, the fault surely lies with the nineteen licensing bodies who, competing for fees, grant licenses to illiterate and incompetent candidates?

As the *Medical Press and Circular*, June 26, 1867, says "*a Dutch Auction of Diplomas exists in the profession*, in which those corporations who desire to maintain a high standard of professional competency are, by the competition of less scrupulous bodies, absolutely starved into a reduction of their requirements. The amount of medical capacity which the public have a right to expect from the profession, is taxed down to a *disgracefully insufficient amount* by a system which makes it impossible for high classed education to be maintained."

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* British Medical Journal, August 10, 1867.

† Ibid., August 17, 1867.

Professor Syme, at the meeting of the General Medical Council, June 7, 1867, gave us a glimpse behind the scenes. He afforded some insight into the murderous practices of the illiterate empirics with which the profession now swarms—"I have known," said he, "diseases of the rectum treated as diarrhœa by physicians who were not acquainted with the subject. They treated them with their opiates, and so on. (Cries of 'order.') I think it quite right I should bring this forward. *No man should be considered a duly qualified practitioner unless he has studied and been examined in every part of his profession.* No man's name should appear on the Registry without a full and entire professional education."*

This is very excellent theory no doubt, but how does it accord with practice?—how does it harmonize with the existing state of things?

"The rivalship in the different licensing bodies *for the possession of fees* still goes on, each striving to undersell the other in the facility with which they permit their diplomas to pass from their strong box into the student's pockets; and the result is *a lamentable state of ignorance* among men who had been pronounced competent to deal with the lives and limbs of their fellow-men."—*Dublin Medical Press*, Jan., 1864.

"At present it is perfectly clear, that a number of men get into the Register and practice *who are dangerously ignorant of the elementary parts of professional knowledge*, and that certain examinations which entitle men to a place on the Register, afford no guarantee of fitness."—*Lancet*, June, 1865.

"We have had notorious and very flagrant instances in very late years, where certain collegiate institutions have sprung up suddenly from poverty to comparative wealth by the sale of diplomas to all who choose to buy them."—*Medical Circular*, March, 1864.

Such a disgraceful state of affairs compelled the Directors of the Army and Navy Medical Departments to refuse the Diplomas, Degrees, and Licenses of every one of the whole nineteen Licensing Bodies, as evidence that the parties holding them were duly qualified to practice. They, therefore, instituted

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* The extracts from the proceedings of the General Medical Council are taken from the report in the *Medical Times and Gazette* of June 1, 8, 15, and 22, 1867.

Examining Boards of their own, so that parties who have been licensed as "duly qualified" to practice by English, Irish, or Scotch Colleges and Universities must, if they desire to be employed in the Army or Navy, submit to another and *independent* examination, to test their capacity. At a recent examination "the Army Board," says the *Medical Times*, "rejected 31 out of 120 candidates, the Navy Board 21 out of 49. The inference is, that nearly one-third of those who are declared by Examining Boards *having a pecuniary* interest in the statement, to be fully qualified to practice the healing art amongst all her Majesty's subjects, are found by independent Boards to be more or less ignorant and unqualified to treat her Majesty's soldiers and sailors!"

Dr. D. F. Rennie, Surgeon 20th Hussars, says on this subject: "It stands to common sense, that if qualified medical practitioners *are not fit* to treat British soldiers without being specially tested, they must be certainly *equally unfit* to treat her Majesty's ordinary, but apparently less fortunate subjects. Such at least is the unvarnished conclusion that the present system inevitably leads to.—*Letter in Lancet*, August 24, 1867.

Referring to the rejection of licensed practitioners who have applied for Army and Navy appointments, the *Medical Times* says: "It must excite the gravest astonishment and reprehension, that men *so grossly ignorant* of their profession as these diplomatized candidates proved to be, could have found it possible to obtain any qualification from any licensing body whatever. How can we wonder that medical men should but too often make such a *pitiable figure* in practice, in the witness-box, and before the educated public in general, when we hear such confessions of gross incapacity, and dullness all over."—*Medical Times*, May, 1864.

In reference to the candidates rejected by the Army and Navy Board of Examiners, Sir Dominic Corrigan, in his address observed: "Each candidate rejected represents *a group of others equally ignorant and incompetent*, who have passed some of our licensing bodies, *are now on the registry* as duly qualified practitioners, and probably in possession of appointment throughout the country, bringing on themselves and the profession the contempt of all well-educated persons with whom they are necessarily brought into relation in social life, *and practising medicine to the hazard, and probably the loss of human lives!*"*

It is a positive truth, as Professor Syme stated, and as any one familiar with the treatment of disease must know, that a practitioner cannot be safely entrusted with human life who is not thoroughly proficient in surgical knowledge. Yet so disgracefully defective is the system of medical education, and so utterly regardless are the licensing bodies of the public interests, that, without having passed any examination by a Surgical Board, a person may be registered as "duly qualified" to practice as a

F. or L.R.P.C.—That is, a Fellow, or Licentiate of the Colleges of Physicians of London, Edinburgh, or Dublin; or as a

H.F., or L.R.Q.C.P.I.—That is, an Honorary Fellow, or Fellow and Licentiate of the King and Queen's College of Physicians, Ireland; or as a

L.M.T.C.D.—A Licentiate in Medicine of Trinity College, Dublin; or as a

M.D., or M.B.—A Doctor or Bachelor of Medicine of London, Edinburgh, St. Andrews, Oxford, Cambridge, Durham, or Dublin, or a

M.D., or M.B.Q.U.I.—A Doctor or Bachelor of Medicine of the Queen's University of Ireland; or a

L.F.P., or M.D., Glasgow—A Licentiate of the Faculty of Physicians, or Doctor of Medicine of the University of Glasgow; or a

M.D., or M.B.—A Doctor or Bachelor of Medicine of the University and King's College, Aberdeen, or of the Marischall College and University, Aberdeen; or

A Licentiate of the Apothecary's Hall, Dublin, or of the Society of Apothecaries, London; and also a Licentiate in Midwifery.

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* British Medical Journal, August 10, 1867.

All these doors and more are standing invitingly open, competing for candidates to enter, pay fees, and receive in exchange for their cash, any of the above combination of letters that may suit their purpose, or tickle their vanity; in virtue of which they can then authoritatively knock at the door of the General Medical Council, and demand to be placed on the Register as "duly qualified practitioners," legally licensed to commit manslaughter with impunity! And yet they may be, and as a rule are, profoundly ignorant as Anatomists, miserably unacquainted with the organs of the human body, and their functions as Physiologists, completely destitute of even a smattering of rational Hygiene, or of natural Therapeutics, while they may be so disgracefully illiterate as to be unable to "stand on the same platform as the pupil teachers in the village schools of Scotland," as Dr. Alexander Wood affirmed, or as Sir Dominic Corrigan said, that they "could not pass an examination for the place of a letter-carrier!"

Nay more, these "duly qualified practitioners" need know comparatively nothing of Surgery even as a mechanical art, let alone possess a knowledge of it as a high and noble science! To possess *one* or *all* of the above enumerated alphabetical distinctions, a Surgical Education or Examination is not necessary! Hence the awful maltreatment of disease that is perpetually taking place, such as Professor Syme gave an illustration of—symptoms are mistaken for disease, patients are cruelly and needlessly tortured, and a multitude of valuable lives are annually consigned remorselessly to premature graves.

But it may be asked—Cannot medicine be safely practised without a knowledge of Anatomy, Surgery, Physiology, and Therapeutics?—without, in fact, thorough education in the Science of Medicine? Sir William Lawrence, one of the most eminent men of his age,* has fully answered the question put in this way—"Is all this knowledge necessary for a practitioner?—is it required that a physician or a surgeon should know anatomy, natural and morbid, physiology, and pathology? To the science of Medicine, and to its rational improvement and extension, *it is necessary;* but by no means so to the *mere routine of practice*, and the *successful prosecution of the trade.* Perhaps, indeed, a firm faith in *drugs and plasters*, and a *liberal administration of them*, may be a surer road to *popular success*, if the remark addressed by a veteran practitioner to a young enthusiast in science be well grounded—*Juvenis, tua doctrina non promittit opes; plebs amat remedia!*"†—which may be freely rendered, young man thy scientific doctrine, though true to nature, will never, if carried out in practice, permit of your success in life, because the ordinary run of mankind love to be cheated with the destructive delusions of Drug Medication!

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* Sir William Lawrence, who, as a Surgeon, Anatomist, Lecturer and Writer, was unrivalled, died July, 1867. "His talents were of the highest order; his acquirements seldom surpassed in our profession."—*Lancet*, July, 13, 1867.

What, then, need a practitioner have—what knowledge *must* he possess? Well, he could not get on cleverly without some knowledge of the *Materia Medica*, but it will be sufficient if he possesses just enough to enable him to prescribe liberally "drugs and plasters," and this any three-and-sixpenny *companion* to the "British Pharmacopœia" will put him in possession of. Hudibras says—

> ———"all a rhetorician's rules
> Teach nothing but to name his tools."

So with Drug practitioners. There is no absolute necessity that their whole stock of medical knowledge should extend much beyond the nomenclature of the Pharmacopœia, and a *companion* at three-and-sixpence will place its whole poisonous contents, with the formulæ for prescribing them, within the circumference of the most illiterate capacity. With such valuable "learning" at command, portentiously and dexterously handled, thousands of such practitioners are enabled to pass "respectably"—nay, profitably—through life, without their path of practice having been illumined by a solitary ray of medical science! And this will continue to be the case as long as public

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[*] Lectures on Comparative Anatomy, &c., seventh edition, p. 45.

ignorance and credulity support and reward practitioners of the kind, and consequently uphold and preserve the false systems of Physic by which they prosper.

But is it not truly shameful that such a state of things should exist in this nineteenth century, as medical authorities themselves admit? Surely if the "educated classes" were alive to their own interests the Medical Profession could not continue to be so unworthily composed as it confessedly is? In this case, however, there is action and reaction. The supinity of the public tends to lower the qualifications and character of the profession—to swarm the country with practitioners of such gross incapacity as to be unfitted to hold an Army or Navy appointment; but, as they must live, of course the reaction is on the public at large, and thus deplorable evils are caused. What but disaster and calamity can be expected to arise from practitioners incapable of treating disease scientifically or rationally? Hence fatal mistakes are constantly occurring. Life is often endangered and frequently sacrificed; but it is seldom, save among the profession, that such things ooze out, for, no matter how gross and palpable the blundering may be, practitioners are found on this point to make common cause, and thus the relatives and friends of the victims immolated are consoled with the assurance, that the resources of Science and Art had been skilfully employed to effect a cure, or at least to procrastinate the fatal issue! "It was God's will!"—"His time had come"—and that is all can be said about it!

In this way, observes an eminent and candid authority, Dr. Frank, "*thousands are annually slaughtered in the quiet sick room!*" Contemplating the havoc thus made by professional incapacity, Dr. Ramage of London placed this denunciatory opinion on record:—"I fearlessly assert that in most cases *the sufferer would be safer without a Physician than with one.* I have seen enough of the *mal-practice* of my professional brethren to warrant the strong language I employ." And Dr. John Johnston, editor for many years of the *Medico-Chirurgical Review*, has given his independent testimony thus:—"I declare, as my conscientious conviction, founded on *long experience and reflection*, that, if there was not a single physician, surgeon, man-midwife, chemist, apothecary, druggist, nor drug on the face of the earth, there would be *less sickness* and *less mortality* than *now prevails!*"

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## SECTION IV.—*Medical Schools and Colleges—Special Hospitals —General incapacity of teachers—Reaction on the Profession —Opinions of Medical authorities on the subject.*

IT is, perhaps, a pardonable delusion for the general public to entertain—that teachers and professors in Medical Schools and Colleges are men of high capacity, admirably qualified to impart sound instruction, and train the student-mind in the ways of science and truth. The evidence of fact, however, is of a very different character. Such appointments are, indeed, seldom made with exclusive reference—or scarcely any reference at all—to distinguished merit, or approved capacity for conveying instruction. Private influences, intrigues, personal or party considerations, for the most part regulate such offices, and the mere interests of students or of science are rarely consulted.

Then, Medical Schools have been multiplied far beyond the real wants of the profession, and practitioners assume the office of teacher, who are deplorably ignorant themselves. A connection with a School or an Hospital is rarely valued, save as a means of obtaining notoriety—of getting into a position for trading profitably on public credulity. When Examining Boards have been induced to recognize the certificate of any school, that is all that is required. The lectures are for the most part pretentious imperfections, and clinical instruction, which is the really valuable part of a student's practical education, is seldom in the hands of men who are earnest, and capable, and conscientious in the discharge of their duty.

In the same way, also, Special Hospitals have been increased to a most mischievous extent. Almost every part of the human body has now its Special Hospital, just as in ancient times the Egyptian Priest-Physicians had a special deity to preside over some thirty-two divisions of the body, in order to multiply rites, and increase the flow of offerings into their coffers. For practitioners to club together and get up a Special Hospital is regarded as a certain passport to public favour. Their own friends of course aid them, and blow their trumpets, the charitable are wheedled out of subscriptions, and thus while there is unity in disease, there is no unity in teaching or treatment, and the time of students really desirous of learning their profession is frittered away in attending illusory instruction.

This is all caused by the delusion of a silly public, prone to believe that practitioners, because they are attached to some School, Hospital, or College, must necessarily be a grade beyond the common. True, some men of rare genius and distinguished teaching capacity are occasionally found in such situations, but as a rule, mediocre intellect and very common-place acquirements, a prejudiced adherence to preconceived opinions, a contentedness to continue plodding on in a dull routine of duties slovenly discharged, and an invincible hostility to the uncomfortable innovations of new truths are, unhappily, the acknowledged characteristics of the medical teaching power generally of the United Kingdom.

Many years ago the eminent Surgeon Carmichael of Dublin, when presiding over the Medical Association of Ireland, pointed out the evils that had then arisen from the systematic exclusion of highly-qualified men from Hospitals, Schools, and Colleges, and the appointment of the nominees of intrigue and favouritism:—

> "Those who want talent," said he, "resort to cunning and underhand dealing; therefore we usually find stupidity and trickery go hand in hand." He complained of "those subtle seniors of the profession upholding, by every means in their power, their aspiring but inefficient allies in the situations which they ought to possess, heedless alike of the injury inflicted on the members of their own profession, and *upon society at large.*" He denounced the "most baneful system," by which highly educated prac-

> titioners were kept in the back-ground, and favoured incompetents thrust forward. "Let me ask," he said, "if matters be allowed to take their present course, who would have the hardihood or folly to enter into the medical profession, except by *commencing his career as an Apothecary's shop-boy*, and snatching such opportunities as may occur to run to the Schools of Medicine to swallow a few mouthfuls of anatomy, and the theory of physic and surgery, that may give him a smattering to support his pretensions? None others could have a chance of even a moderate livelihood. As it now stands, what gentlemen would permit his son to enter the profession?"

Few gentlemen do, and so much the worse for the profession and the public. It has been noticed as "not a little singular how few of the great names of the profession of a few years back are now to be found in it." This betokens, says Dr. Edwin Lee, "that a perfect acquaintance with the state of the profession, and of the drawbacks to be encountered, together with the little value of such success as could be achieved, was quite sufficient to deter the most distinguished members from bringing up their sons to it."* The same writer, in referring to the imperfect practical education which medical students too commonly receive, notices the cause—viz., the frequent inefficiency of the teachers, which, he says, "*has of late become more apparent*," and considers it absurd to suppose that persons appointed by "indirect, unprofessional agencies, would prove either efficient clinical instructors, or calculated to make the great opportunities afforded by their position available for the promotion of medical science."

There is a unanimity among Medical Journals in representing the evils of the existing system. The *Lancet* says: "We find *feebleness, rottenness, and decay* in a system upon which the practical education of the profession depends." "Ignorance and intrigue," says the *Medical Times*, "take the place of knowledge and worth, alike to the injury of science and humanity. . . . In the councils of colleges, and in public institutions, instead of men of originality, of genius, of great discoveries, like Harvey or Hunter, we have *a stunted, dwindled,*

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* State of Med. Prof. further exemplified, p. 52.

*degenerate crop of intellect, of mental cripples the offspring of the pernicious atmosphere in which they moved and had their being.*"

"In many cases," says the *Medical Circular*, "the teachers are too much engaged in private practice to enable them to devote the necessary time to the instruction of students; but in other instances, and those are unfortunately too numerous, *the lecturers do not possess the requisite qualities* to make them efficient teachers."

Then the unnecessary increase of Schools tends to aggravate the evils of the whole system. "In London, and we doubt not in other places, schools of medicine have been unnaturally forced into existence. A given number of medical men united about a hospital, or elsewhere, have discovered that they wanted to teach medical students. Instead of waiting till the students came to seek their instructions, the instructors, having in view not simply the instruction of the student, *but other objects of a kind much more personal to themselves*, have sought the students. Wherever this nursery of medical schools into existence has prevailed, no doubt *much injury to medical education has resulted.* The professors should be made for the chairs, not the chairs for the professors."—*British Medical Journal*, February 6, 1865.

Dr. Heberden, in his *Commentaries*, declares that, "of *all* the once celebrated teachers in the several schools of Europe, very few have furnished us with one new medicine, or have taught us better to use old ones, or have, *in any one instance*, at all *improved the art of curing diseases.* Hence, though they have been applauded during the lives of their disciples, yet disinterested and impartial posterity has suffered each succeeding master of this sort to be gathered to his once equally celebrated predecessors, and to be like them, in his turn, *equally unread and forgotten.*"

And this is what "celebrated" schools, and "celebrated teachers," all over Europe, have done for medical science! It is marvellous indeed, that, with such results, Schools should still be on the increase in our own day. Inferiorly educated, and ill-disciplined students are the necessary consequence of inferior

Professors, of inferior teaching, and of a perniciously false system of doctrine, yet almost every hospital is now perverted from its original purpose, and made a medium for the propagandism of school chimeras, to subserve the personal interests of a few medical cliques :—

> "How the Governors of Hospitals were ever inveigled into the movement, we cannot say, but *certain it is that*, the example once set, every hospital in the metropolis had a call to teach, and now *every hospital has its school.* Its effects on schools has been to *raise six* where there should be *only one;* its effects on teachers has been to *raise twenty* where there should be only *only one;* its effects on the election of teachers has been, that lecturers are now systematically propagated, not on the basis of *their knowledge*, their *aptitude*, or their *love* for their work, but often *in spite of their grossest defects*, on their alliance with particular hospitals, Its effect on education has been, to render that the *most stagnant, slipshod, ridiculous practice* ever conceived!"—*Social Science Review*, Oct., 1862.
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> "Taking the schools altogether, the lecturers (in London) number, in proportion to the students, about *one* to *four* and one-third, but in some of the smaller establishments, every two students get a Professor to themselves!" "The struggles of the schools is to secure the greatest number of entries. One of them, last October, had an entry of *thirteen* students. There are *sixteen* lecturers at this school!" "A certain number of students have to be milled into examiners, and then passed through the licensing seives into the market, for general consumption. Ordinary students will know that much is not wanted of them, or that, provided they can get their certificates by flattering punctuality in opening their note-books, they may dream or whistle away *the dreary hours of recognised talk*, in the confident assurance that too or three months' cram, at last with the convenient college tutor, or recognised grinder, will make all safe for them." —*Medical Times*, Feb., 1866.
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> "We do affirm, that our schools do turn out numbers of "half-trained, half-educated men," says the *Medical Times*, and consequently, remarks the *Lancet*—" that the profession is *deplorably overstocked* is notorious. Everywhere medical men are jostling each other for the merest crumbs of practice and emolument."

Thus it is that all interests conspire to degrade the Profession. Schools and Colleges are interested in obtaining the greatest possible number of students; therefore, competition ensures the lowest possible *curriculum* as an enticement for students to enter. True, they are turned out "half-trained and half-educated," but what of that?—the nineteen licensing corporations greedily compete for them, such as they are—eager, for the sake of fees, to license them as "duly qualified practitioners!" Hence the notorious overstocking of the profession, with all the multitude of abuses that follow.

But the evil does not end here, for "the half-trained, half-educated" of one generation are the teachers of the succeeding, and thus retrogression, not progress, is encouraged. In illustrating the social condition of the United States, George Combe, in his *Notes*, observes:—"A stream cannot rise higher than its fountain, so, in social life, if the public mind be blind and selfish, the representatives of that mind never rise into the regions of truth and justice." Exactly so with professional life—the student-mind, except in rare instances, will never soar above the teacher-mind, but reflect with a fidelity more or less intense its prejudice, errors, bigotry, conceitedness, and intolerance. Hence it is that the atmosphere of Colleges and Universities has never been favorable to the development of a high order of mind. The discoveries that have enriched science and immortalised illustrious thinkers have not emanated from them. Their tendency is not to encourage the spirit of free intelligence that looks hopefully forward, but to benumb its energies and check its aspirations by chilly overshadowings of the past.

What Lord Bacon said two centuries ago of universities is critically true of the medical schools, colleges, and corporate institutions of to-day:—

> "In the universities all things are found *opposite to the advancement of the sciences;* for the readings and exercises are here so managed, that it cannot easily come into any one's mind *to think of things out of the common road;* or if here and there one should venture to use a liberty of judging, he can only impose the task upon himself without obtaining assistance from his fellows; and, if he could dispense with this, he will still find his industry and resolution *a great hindrance to his fortune.* For the studies of men in such places are *confined and pinned down to the writings of certain authors,* from which, if any man happens to differ, he is presently represented as a *disturber* and *innovator.*"

Hence Surgeon Gamgee's remark, that "Medical corporations have been our Nero and Bellarmino, not our Solomon and

Lorenzo il Magnifico." All institutions, indeed, privileged to exist for professional education are so conducted as to subvert the true end of teaching, which is not so much the inculcation of dogmatic opinion, as the training of the mind to a thoughtful examination into the grounds of all opinions. It would seem, however, as if it were their peculiar province to discourage inquiry, to perpetuate mere dogma, secure the reign of a contented mediocrity, and punish, by persecution, in one form or other, any one who would seek to disturb their dreary dulness, just as in Grey's elegy—

> " The moping owl doth to the moon complain,
> Of such as, wandering near her secret bower,
> Molest her ancient solitary reign."

Hence the egotistical self-complacency of teachers, and the approbation won by those who plod patiently along the sanctified highways of authority, no matter how barren the road and comfortless the prospect; and the intolerance with which any turning aside from established sterility is regarded, though the richest pastures of science lie invitingly open. Hence, too, the fatal ascendancy which school dogmatism is enabled to maintain, burthening and repressing intellect like a nightmare—cramping its energies and perverting its impulses. Free thought becomes impossible, mind is condemned to weary itself on an intellectual tread-mill—there is motion to be sure, but no progress—nothing but a perpetual routine of hazy exposition and pretentious elaboration of frivolous verbiage, while great principles are scorned, nature slighted, and truth anathematised. "For the last ten centuries, at least," observes Dr. Dickson, "Professors have been doing little else but splitting straws, blowing bubbles, and giving a mighty great degree of gravity to feathers!"

> " ——— in the same dull round we see them creep,
> Profoundly trifling—profitlessly deep,
> Treading the paths their sires before them trod—
> The Past their heaven—Antiquity their god!"

Professional education of such a character might do very well for parrots and monkeys—to teach the art of repetition and imitation; but assuredly it is not designed to raise up such a generation of medical practitioners as the interests of science and of the public so impressively demand.

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### SECTION V.—*Value of Medical Opinion considered—Experience alone an unsafe criterion to judge by—Great knowledge consistent with gross ignorance—Scientific experience testifies against Drug Medication—Admissions of High Medical Authorities, Sir John Forbes, Sir Thomas Watson, &c., concerning the Inutility of Drugging—The Helpless Condition of the Drug School.*

DEFERENCE to the opinion of Medical men, as such, is alone warranted, on the supposition, that they are really what they pretend to be—educated gentlemen, members of a learned profession, with minds trained to observe sagaciously, to discriminate judiciously, and reason logically. But if their educational acquirements would not qualify them to stand on the same platform with pupil-teachers in the village schools of Scotland, as Dr. Alexander Wood affirmed, or enable them to pass an examination for such a civil service appointment as a common letter-carrier, as Sir Dominic Corrigan declared, how is it possible to have faith in their educated judgment, or to repose confidence in their professional opinion?

But it may be alleged, that men very ignorant indeed, on entering the profession, acquire knowledge and skill by experience. Perhaps so, yet it would be a fatal error to suppose that any amount of experience *necessarily* gives wisdom, or imparts skill—renders medical opinion valuable, or its effects salutary in practice. There must be *a mind* capable of profiting by experience, and then experience itself must be acquired, not in the ways of error, but in the pursuit of truth. These are the imperative conditions necessary to any profit being derived from experience.

Long and laborious practice in scholastic dialectics made the Schoolmen dexterous sophists and wonderful proficients in metaphysical subtleties, but never revealed to them one vivifying truth contained in the great volume of nature that lay unopened before them. On the contrary, their monotonous experience was altogether in a vicious circle, and only tended to confirm ignorance and deepen prejudice—to contract intellect, and render antipathies to truthful change more inveterate. So with the experience of the great majority of medical men. Guided by false principles, and labouring in pursuit of false systems, what can a life-long experience do for them? It cannot change the essential nature and eternal fitness of things. All the toiling industry and patient plodding of all the medical men that ever lived have not yet succeeded in extorting from nature the secret of one solitary Drug to cure disease! Practice can never make perfect in such a pursuit, an experience thus reaped is, indeed, but "the wisdom of fools!"

Operating on trained intelligence, on a candid truth-seeking mind, experience undoubtedly performs a noble office—it corrects the superstitions and errors of early and confiding life—it tests the teaching of maturer years, it passes through the alembic of reason, the dogmas of Schools, the theories of systems, and the *crambe bis cocta* prelections of collegiate infallibilities—it winnows the wheat from the chaff—vindicates the high prerogatives of mind, and by exploring Nature, discovers truth. But unfortunately, the history of the world shows that it is only a select, and often persecuted few, that have thus endeavoured to make experience available.

In ages past, as well as at present, there have been minds so constituted and cultivated, as to find in experience a true source of knowledge, but they are to be counted as units in comparison with the millions of ill-constituted, ill-cultivated minds that have only found in experience a confirmation of their prejudices and errors. Hence to the great majority of medical practitioners, Experience performs the same office, and with precisely similar results in the authentication of erroneous preconceptions, as in the case of the Sultan described by Byron, who

"— Saw with his own eyes the moon was round;
Was also certain that the earth was square,
Because he had journeyed fifty miles and found,
No sign that it was circular anywhere."

Dr. Graves, in an introductory lecture on Medical Education, delivered in the Meath Hospital, Dublin, dwelt with freedom and force on this waste of experience on the ordinary run of medical men. He remarked how all the lessons of experience are thrown away on

> "Many an old practitioner, whose errors have grown, and have increased in strength during a long succession of years, because from a *defect in his original education*, he commenced practice without having acquired the *power* or *habit* of *accurate observation*; because he had not in his youth been *taught to reason justly upon the facts presented to his view;* because not having learned to *think accurately*, he contracted a loose and careless mode of examining the progress of disease, and the effects of remedies; and, consequently, *the lapse of time has had no other effect upon his errors than that of rendering them more inveterate.* Such a man has generally an *overweening confidence* in his *own judgment;* he never detects, or is conscious of his *own mistakes;* and instead of *improvement*, years bring only an *increased attachment to his opinions*—a *deeper blindness* in examining the results of his own practice; and *do not such persons abound in every branch of the profession?* Believe me, gentlemen, *the quacks who cover our walls with their advertisements, vend not annually to the community more poison than is distributed according to the prescriptions of our routine and licensed practitioners.*"

What a fearful description this gives of medical practice, and by a gentleman, too, of the finest character, and most eminent professional repute! It is conclusive, however, on one point—that the most extensive practice, when based on erroneous principles, can never become natural and truthful, nor lead to desirable results; and also, that experience, no matter how enlarged and prolonged, operating on ill-trained, ill-educated minds, warped by prejudice, like seed sown on an arid desert, is never destined to take root and fructify. Just as two parallel lines, though extended into the infinity of space, can never approach nearer to each other than when first projected, so experience in the practice of Drug Medication, though extended over thousands of years, if essentially false in its inception, can never approximate the healthful and sanatory from being doggedly adhered to. What then becomes of the experience of physicians who spend their lives in following illusory systems?

Yet experience, wisely employed, is invaluable to a medical practitioner, capable of following and profiting by its unerring teaching. It stands in opposition to the speculative theories and fanciful systems of Physic, which, propagated by schools, have inflicted incalculable misery on mankind, and which are now followed as keenly as ever. "In politics and morality," observes Dr. Heberden, "Experience may be called the teacher of fools; but in the study of nature there is no other guide to true knowledge." But how do practitioners in physic, as a body, follow such a guide?

"The Drug-Physician," says Dr. Edward Johnston, "Can never find a reason for the administration of the drug he prescribes. If he be asked for one, his answer is, that *his experience* has convinced him that it is useful in such cases. Nothing can be more convenient than this answer. It silences all further questioning, and admits of no argument.

"But, then, if you walk straight from Physician No. 1 to Physician No. 2, he will, in nine cases out of ten, give you a drug whose *nature* and *effects* are as *different* from that prescribed by the first Physician as any two things can well be. Yet, if you inquire of the second why he orders for your case the particular drug or drugs which he prescribes, he will give you the same answer as the first. He will tell you that *his experience* has satisfied him that the drug he has ordered for you, is useful in such cases. At this rate, *remedies for diseases must be as plentiful as blackberries!*

"But what possible reliance can be placed upon this sort of experience? What possible reliance can be placed upon the experience of any one out of twenty men, when it is found that the *experience of each of the twenty is contradicted by the experience of all the others?* Every man prescribes according to his own experience. But the practice of different medical men in the same disease differs as widely as the poles. *Their experience* therefore, *must be equally different* and *contradictory*. What value can be placed on such experience? The truth is, that what they call experience is *mere accident*. Some two or three patients from some fortuitous combination of circumstances, or other unintelligible cause, have happened to get well of some particular disease, while taking some particular drug. This, the Physician calls his experience; and he continues all his life afterwards to prescribe that drug for that disease, although, perhaps, he never cures another patient with it. But he goes on hoping and hoping in every fresh case of the same disease, that the same drug will again succeed.

"A friend of mine once consulted six London physicians in one day, and then brought all their prescriptions to me, and it was most amusing to read over and compare these prescriptions. *There were not two which, in the slightest degree, resembled each other.* I proposed to my friend that he should take them all six. But he adopted a wiser course, and took none of them. The truth is that, in the treatment of chronic disease at least, *the exhibition of drugs is pure speculation.* There is nothing certain in the matter, but *the certainty of doing mischief.*

"The result of all this is that *an entirely new set of diseases has sprung up among mankind*, which have regularly taken their places amongst other ordinary human maladies, and are classed together as *drug-diseases*, and each is named after the drug that produces it. And we hear medical men talking familiarly together, and as *unconcernedly* about *mercurial tremor, mercurial eythema, arsenical disease, iodism, narcotism*, &c., &c., as though these disorders were inflicted upon us by Providence instead of *by their own mal-practices!* It is by no means uncommon for one medical man to be called in to cure a disease which has been caused by the drugs of his medical brother."—*Practice of Hydropathy*, p. 83, &c.

Now, what does this diversity of opinion, of experience, of practice import? Is it significant of health or death to patients? Were Physic a science, or possessed of the slightest pretensions to accuracy and certainty in its theories or practices, could such discordant and destructive diversity possibly exist? Anatomists, Physiologists, Pathologists, Botanists, Naturalists, Geologists, Astronomers, Mathematicians—in short, the professors of every scientific pursuit exhibit no such diversity of opinion as the result of *their* experience. The great book of Nature is open to them all in their several departments of inquiry—they all read and observe, and no matter in what quarter of the globe Nature may be questioned, the result is the same. In the experiences, the observations, the conclusions of all there is a harmonious concurrence—a beautiful uniformity that bears the impress of truth. Is that so with Physicians in the same town or country, let alone in Europe? Physical truth is the same all the world over; but in the Physic of Physicians what is there truthful and certain save—disease and death?

What matters it, then, to be told, that there must be some truth in medicine, because many learned men follow it, and because it has been followed so long? Is such an argument rational? Is such reasoning philosophical? Is not great knowledge quite consistent with the existence of gross ignorance and superstition in one and the same mind? Besides the universality of a belief furnishes no proof of its truth, nor does the general concurrence of medical practitioners in following any system, or of mankind in reposing a blind confidence in it, afford any rational evidence whatever to justify an unreasoning acceptance of it as founded in nature and warranted by truth. For hundreds and hundreds of years the most profound intellects in Europe were enchained by the dreams of the Alchemists, and in the sincerity of conscientious belief engaged in fruitless researches after the "Philosopher's stone," and had faith in the practicability of extorting from Nature the secret of an *elixir vitæ*, by which all diseases could be cured and life indefinitely prolonged! The universality of a belief in witchcraft, in which the greatest minds participated, though it made the superstition more "respectable," assuredly did not render it one whit more rational and truthful. And so in a multitude of similar instances, which will readily occur to the intelligent reader.

Therefore, although medical practitioners, from the days of Hippocrates, have been persistently on the search for some drug preparation with which to cure disease—though the resources of the vegetable and mineral worlds have been exhausted, and the art of chemistry employed to distil, analyse, and sublimate—though plausible theories have been framed, and every hypothesis that could enter the wildest imagination has been recklessly tested regardless of the sacrifice of human life—yet what has come of all such superlative folly? On what foundation has such laborious experience now placed the practice of Physic? Where is the unerring specific for any one form of disease? Where is the single drug whose alleged curative virtues can be confidently relied on? Why, notoriously by the admissions of the highest professional authorities there is no specific—no catholicon—no such thing as medical science in relation to mere Physic! Hence the medical practice of our day is, in the words of Professor Evans, "*at the best, a most uncertain and unsatisfactory system; it has neither philosophy nor common sense to commend it to confidence.*"

Experience, therefore, acquired in an illusory pursuit, or in a wrong direction, can never be considered as implying truthful knowledge. As well might it be expected that the constant experience of a pickpocket would end in making him an honest man, as that the experience of the mere practitioner in physic—no matter how extensive or prolonged—could possibly enable him more successfully to combat disease, because, however earnest and conscientious he might be, his system is essentially a false one, and the means he employs are naturally antagonistic to human life. Hence, after the experience of ages has been exhausted in testing all the various forms and resources of Drug Medication, Dr. Sir John Forbes candidly said—"There is now *no proof whatever* that *any remedy*, administered by the most experienced physician, *exercises the slightest influence over disease!*"

The deliberate and emphatic expression of this significant opinion was made by Sir John Forbes, as Editor of the *British and Foreign Medical Review*, in an able paper, discussing the merits and pretensions of Homœopathy, and as Sir John's great eminence in the profession renders his authority indisputable, he can be confidently relied on when he candidly reveals the errors and shortcomings of medical practice. In examining the present state of drug therapeutics, he arrives at the following conclusions:—

"1. That in a large proportion of the cases treated by Allopathic (Drug) physicians, the disease is cured by nature, and *not by them.*"

"2. That in a lesser, but still *not a small proportion*, the disease is cured by nature, *in spite of them*; in other words, *their interference opposing, instead of assisting the cure.*"

"3. That, consequently, in a considerable proportion of diseases, it would *fare as well, or better, with patients*, in the actual condition of the medical art, as more generally practised, if *all remedies*, at least all active remedies, *especially drugs, were abandoned*.

"Although Homœopathy has brought more signally into the common daylight this *lamentable condition* of medicine regarded as a practical art, it was *well-known before* to all philosophical and experienced physicians.

"It is, in truth, a fact of *such magnitude*—one *so palpably evident*—that it was impossible for any careful reader of the history of medicine, or any long observer of the processes of disease, not to be aware of it. What indeed, is the history of medicine but a history of *perpetual changes* in the *opinions* and *practice* of its professors, respecting the very same subjects—*the nature and treatment of disease*? And, amid all these changes, *often extreme* and *directly opposed to one another*, do we not find these very diseases, the subject of them, remaining *the same* in their progress and general event?

"This comparative *powerlessness* and *positive uncertainty* of medicine, is also exhibited in a striking light, when we come to trace the history and fortunes of particular remedies and modes of treatment, and observe the notions of practitioners, at different times, respecting their positive or relative value. What *differences of opinion*—what an array of *alleged facts directly at variance with each other*—what contradictions—what opposite results of a like experience—what ups and downs—what glorification and degradation of the *same remedy*—what confidence now, what despair anon in encountering the *same disease* with the *very same weapons*—what *horror* and *intolerance* at one time of the very opinions and practices which, previously and subsequently, are *cherished* and *admired*!

> "Quod fuit in pretio, fit nullo denique honore;
> Parro aliud succedit, et e contemptibus exit,
> Inque dies majis appetitur, floretque repertum
> Laudibus, et miro 'st mortaleis inter honore.

"The same truth, as to the uncertainty of practical medicine generally, and the utter insufficiency of the ordinary evidence to establish the efficacy of many of our remedies, has been almost always attained to by philosophical physicians of experience in the course of long practice, and has resulted, in general, in a mild, tentative, or expectant mode of practice *in their old age*, whatever may have been the *vigorous or heroic doings of their youth*.

"Who among us, in fact of any considerable experience, and *who has thought somewhat as well as prescribed*, but is ready to admit that,—in a large proportion of the cases he treats, whether his practice, in individual instances, be directed by precept and example, by theory, by observation, by experience, by habit, by accident, or by whatsoever principle of action,—he has *no positive proof*, or rather *no proof whatever*, often indeed very little probability, that the remedies *administered by him exert any beneficial influence over disease*?

"We may often *hope*, and frequently *believe*, and sometimes *feel confident* that we do good, even in this class of cases; but the honest, philosophical thinker, the experienced, scientific observer, will hesitate, *even in the best cases*, ere he commit himself, by the positive assertion, that the good done has been *done by him*. When physicians of *this stamp* have met *in consultation* in any doubtful case, and when they have chanced to be *startled out of their conventionalities* by the bold doubt, or bolder query, of some *frank* brother of the craft, has not the confession, like the confidence, *been mutual?*

"And when his comrade's thought each *doctor* knew,
'Twas but his own, *suppressed till now*, he found."

There is much more in this remarkable paper worthy of notice, but Sir John see-saws somewhat in delivering his experience, under the deterrent consciousness, no doubt, of the storm of indignation his frankness would raise against himself. He says: "That there are *charlatans* and *impostors* among the practitioners of Homœopathy cannot be doubted; but, alas, *can it be doubted*, any more, that *there are such*, and *many such among the professors of orthodox physic?*" He professes candidly enough, that he has no faith in Drug Medication, yet he hesitates to advise its total rejection. He wishes to compromise matters—to cobble defects and evils—to put "new wine into old bottles," and hope for the best. No eminent success was ever attained by such a temporizing policy.

It is natural that he should look upon medicine, regarded in all its parts and all its bearings, as a noble and glorious profession," and *minus* drugs, and drug practitioners, the eulogium may be accepted. But then he presents to us a picture of British medicine that ought to set patients to work preparing their shrouds!

"British Medicine," he says, "has profited considerably, and most especially by some of the *humbler notions* and *milder practices* of our continental neighbours. In the treatment of acute diseases, we have attained somewhat nearer to the heroic virtue of patience, from an increased knowledge of the morbid processes going on; in chronic disorders we have become *more regimenal* and *less druggish*, in all cases, *perhaps*, we have grown a little more trustful of *nature*, and a little less trustful of *art*. Nevertheless, *it cannot be denied* that the more ordinary proceedings *of a large proportion of the practitioners in this country* differ from those of their predecessors, much more in their nature *than in their effects*; and that *they are, to a lamentable extent palpably and egregiously wrong.*

"We doubt, therefore, if we should greatly, *if at all*, exceed the bounds of truth, if we said, that the progress of Therapeutics, *during all the centuries that have elapsed since the days of Hippocrates, has been less* than that achieved in the Elementary Sciences of Medicine during the last fifty years. This department of medicine must, indeed, be regarded as yet *in its merest infancy* (an 'infancy' of more than two thousand years!) It would, doubtless, be going far beyond the truth, to assert that there is no certainty in Medicinal Therapeutics, and that the whole practice of medicine, *in so far as this consists in the administration of drugs, is a system of traditionary routine and conventionalism, hap-hazard, and guess-work*, but it is *not* going beyond the truth to assert that *much of it is so.*"*

These are only a few of Sir John's free confessions and bold denunciations of the feebleness and uncertainty of "Drug Therapeutics," and are they not utterly condemnatory of the whole system of Drug Medication? For surely, if after thousands of years spent in search of drug remedies, without finding a solitary one; if medical practice has reached such a stage of impotency and imbecility for good, though potent enough for evil, in our own day, as to warrant Sir John in declaring, "*things have arrived at such a pitch that they could not be worse, they must mend or end*"—surely, when such is the result patients have to contemplate, no man outside a lunatic asylum could be so bereft of sense as to repose confidence in a drug practitioner?

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* *British and Foreign Medical Review*, vol. xxi.—In all that Sir John Forbes said against the Drug system of practice, there was nothing absolutely new, the main offence consisted in such truths being presented in a concentrated form, and in the pages of an authoritative medical journal; he had therefore to pay the penalty imposed on all conscientious thinkers, who give candid expression to their opinions—he was misrepresented, and virulently assailed, so that he was obliged to relinquish the Editorship of the *Review!* The article from which we have quoted reviews the doctrines of Homœopathy, a system of practice that has mainly obtained credit as a protest against the "fearful polypharmacy" of Drug practitioners, but in so far as it deals with drugs it is essentially a false system. It has, however, the merit of being *less actively destructive* than drugs in the hands of the regular practitioner. On the principle—*the less of an evil the better*, Homœopathy has done good. As Sir John Forbes admits, it will "probably be the cause of more fundamental changes in the practice of medicine, than any previous system since the days of Galen." It has contributed to wean the public in some slight degree from a superstitious faith in Drugs swallowed wholesale, but it tends still to keep alive an irrational belief that natural poisons *in any quantity* possess a curative power, What pass current as "Homœopathic cures," are effected by the action of the imagination on the nervous system; by Diet, Regimen, and the free undisturbed operations of the *vis medicatrix naturæ.* Homœopathy as patronised and practised by intelligent men, is only a natural and laudable reaction against the excesses of the Drug system in which Drug Doctors have so long revelled—which is profit and luxury to

Twenty-two years have now elapsed since this terrible exposure of Drug Medication was published, and the progress made since then by the profession towards a more rational system, may be learned from an address delivered at the opening of the Clinical Society of London, January 10, 1868, by Dr. Sir Thomas Watson, Bart., the most eminent drug practitioner of our day. He commenced by saying, "that the application of remedies to *the cure or relief of disease*" was "the *end* and *object* of all their labours." Devoted to this "end and object," during a long and prosperous career, Sir Thomas has lived to see at least a dozen different systems of medication rise, flourish, and fall, with their various modes of treatment, and their innumerable "remedies!" He has practised every one of them! —he has bled, blistered, purged, starved, and stimulated for one and the same disease!—he has tried every drug that obtained a fleeting celebrity, and tested every pharmaceutical remedy that has been proposed for "the cure or relief of disease!"

And now what is the grand result he proclaims to the world? Has he realised his "end and object?" Has he discovered *one* remedy for any *one* disease? He has acquired

them but protracted suffering and death to patients. By administering infinitesimal doses, paying attention to diet and regimen, and trusting to nature, Homœopathy, occupies a sort of "half-way-house" between the deadly practices of Physic on the one hand, and the incontestible Sanitary and Sanative powers of natural Hygienic and Therapeutic agents on the other. In practice, it virtually, though covertly, works with the latter, but to be honest it ought to put away false pretences and do so openly and candidly.

riches, and attained the honors of the Baronetage by his faithful devotion to the Drug School, but has he now in his old age any more *certainty* in treating diseases, than when, to prevent Apoplexy, he bled patients to the extent of producing Hemeplegia!—when to cure Dyspnœa, he rolled them up in a "waistcoat," or a "breast-plate of blistering plaster"!—or when to cure Pneumonia, he opened a vein two or three times in the twenty-four hours, besides freely using the lancet, cupping-glasses, and leeches!—or when to cure Hydrocephalus, he bled children three months old freely, blistered them, and dosed with mercurial preparations, jalap and scammony!—all of which grave-yard practice, and much more to the same purpose, is authoritatively set forth in his *Practice of Physic!* Is this his present system of Therapeutics? If not, what then is the sum of all his extended experience in the healing art?

Here it is—"Certainly the *greatest gap* in the science of medicine is to be found in its final and supreme stage—*the stage of Therapeutics!*" That is, the "greatest gap" occurs at the very "stage" in which medicine is of any practical value whatever!—the "stage" to which all medical knowledge and experience worth possessing necessarily tends!—the "end and object" professedly of all medical labour and research! Therapeutics, or the art of curing or relieving disease, is "the final and supreme stage" of medical science, yet here it is at this very critical and important "stage," that Sir Thomas Watson, the authoritative exponent of the Drug School, confesses the "greatest gap" is now to be found!—a "gap" not yet filled up, or bridged over, though thousands of years have been spent in feeding its voracious depths with human victims!

Such is the position of Drug Therapeutics at the present day, and why is this? Because, confesses Sir Thomas, drug practitioners have all along been labouring in ignorance, and with a horrible recklessness as regards human suffering and life! "*To me,*" he says, "*it has been a life-long wonder how vaguely, how ignorantly, how rashly, drugs have been prescribed.* We try this, and, not succeeding, we try that, and, baffled again, we try something else; and it is fortunate if we do no harm in these our tryings. Now, *this random and hap-hazard practice*, whenever and by whomsoever adopted, is both dangerous in itself, and discreditable to medicine as a science. *Our profession is continually floating on a sea of doubts about questions of the gravest importance.*"

Hence, Sir Thomas admits that, "*of Therapeutics as a trustworthy science, it is certain that we have as yet only the expectation.*" Thus the result of his life-long experience has only brought the certain conviction to his mind, that in drug remedies there is no certainty at all, save the certainty of their therapeutical worthlessness! Yet he is contented to linger on in "expectation" of something turning up to stop this "greatest gap" in Drug practice. But in what direction does he look for the appearance of this miracle? He, and thousands with him, have been in their own way engaged in rivalling the fabled labours of Sisyphus—they have been attempting to roll the stone of Drug-Therapeutics to crown the summit of medical science, and now, when venerable by years and experience, he finds himself helplessly bewildered at the base, floundering in the "Slough of Despond!" In this position what is the advice tendered by so sagacious a Nestor to the Clinical Society of London?

Does he counsel the members to take heed of past failures? —to pause and reflect that, after all, it is just possible no remedial properties whatever reside in drugs?—that it is equally possible they have all been following an *ignis fatuus*, as deceptive and illusory as if they had been credulously engaged in the transmutation of metals?—that it is, at least, worthy of consideration, whether the reason of their failure, having been so successive and constant, may not be found in the fact that they have been proceeding in a *wrong direction from the first*, and thus "the end and object" aimed at never could be reached? Common sense might surely have suggested such considerations, but, wedded to the traditions of the Drug School in which he was taught, and whose destructive practices he has followed for half a century, Sir Thomas still clings to drugs, and only wants to know more about them! "The influence of drugs upon the bodily conditions of health and disease," he says, "is, indeed, *most real* and *most precious to us*. The rough, yet sanative, effects of emetic and purgative drugs are notorious to all. But there is a host of other known *or reputed* remedial substances—to say nothing of a further host, no doubt, hitherto unthought of and unessayed—about which our practical knowledge is *very loose, imperfect*, or *even misleading*. Concerning the peculiar virtue and specific agency of each and all of these, present and to come, we want sound and *multiplied experience*."

But how is this "multiplied experience" to be obtained? How many hundreds of thousands of additional victims must be sacrificed at the shrine of the Drug idol, before that "multiplied experience" can be acquired? Such sacrifices, according to an eminent authority, Dr. Mason Good, have already "*destroyed more lives than war, pestilence, and famine combined!*" And with such a profitable result, too, as Sir Thomas himself confesses—leaving drug therapeutics, as a trustworthy science, a matter as yet only of *expectation!* Dr. Ballie, a disciple of the Drug School as eminent in his day as Sir Thomas is now, if not even more so, repeatedly exclaimed on his death-bed—"*I wish I could be sure that I have not killed more than I have cured*," and his dying declaration was—"*I have no faith in Physic!*" Yet Sir Thomas still has faith, and only wants—the "multiplied experience" derived from the multiplied slaughter of a numberless multitude of victims, in the hope that his superstitious credulity may yet be miraculously verified. Thus, like Mr. Micawber, Sir Thomas Watson is waiting for something to turn up; but why does he not commence a series of experiments on himself, and induce the members of the Clinical Society to follow his example? If medical men, indeed, were compelled to test the value of drugs on themselves, before administering them to patients, the Apothecary and Druggist, like Othello, would very soon find their "occupation gone."

Yet, while Sir Thomas Watson affirms, that the "influence of drugs is indeed most real and most precious," he makes the stultifying admission, that he does not know distinctly anything about the *action of drugs!* Here are his words:—"*We want to learn distinctly what is the action of drugs,* and of other outward influences, upon the bodily organs and functions—for every one now-a-days, I suppose, acknowledges that it is only by controlling or directing the natural forces of the body that we can reasonably hope to govern or guide its diseased action." Thus, while pronouncing the influence of drug action to be "most real and most precious," he, in the very same breath confesses his ignorance of what that action is!—confesses he wants "*to learn distinctly what is the action of drugs!*" Such is the logical consistency and common sense of the Drug School!

But there is a more important consideration. Sir Thomas has been seeking, during a prolonged professional career, to "control and direct the natural forces of the body" by bleeding, blistering, and interminable drugging, in the hope of being enabled by such means "to govern or guide its diseased action." Has he succeeded? Is not his whole address to the Clinical Society the humiliating confession of a misspent life? Is he not compelled to admit, that he now possesses no trustworthy therapeutical or curative knowledge?—for, that of physic-therapeutics as a trustworthy Science, *it is certain,* we have as yet only *the expectation?*

In this dilemma did Sir Thomas ever consider it a duty morally incumbent on him to look beyond drugs?—a duty imposed by the obligations and responsibilities of his profession—a duty binding on the consciences of all men to inquire, investigate, and seek truth—has he ever, in discharge of that imperative and solemn duty, devoted his attention to the natural Therapeutic Agents of Hydropathy? Has he sought in Nature for natural means to "control and direct the natural forces of the body," so as "to govern or guide its diseased action?" Has he ever studied the action of the Hot-Air Bath, as scientifically directed in harmonious concurrence with the principles of Physiology? He cannot be ignorant of the marvellous revelations of modern science concerning the functions of Heat in the Physical World, did it never occur to him to study its action in relation to abnormal conditions of the human body? There is now no justifiable excuse for ignorance or indifference on such subjects. It is the sacred duty of every medical man, who presumes to interfere with the functions of life, to make himself thoroughly acquainted with them, and have a rational opinion one way or the other. If, then, Sir Thomas has not failed in this duty; if he has studied the scientific developments of Hydropathy, why did he not communicate something of his experience, in this direction, to the Clinical Society. He should have been as candid and outspoken as he was about drugs; and no matter what his opinion may be, under no conceivable circumstances, can his silence be deemed creditable to him.

It is thus by examining what may be regarded as the *confidential confessions of accredited medical authorities among themselves*, that an intelligent public can best arrive at a true knowledge of the character of medical practice, and be enabled most correctly to estimate the degree of confidence that, as rational beings, they ought to repose in the admitted impotency of the Drug School. Further light is thrown on this subject by a very remarkable paper read before the Harveian Society, London, Feb. 6, 1868, by Dr. H. W. Fuller, senior Physician to St. George's Hospital, entitled *On Drugs, their Actions and their Doses*. Dr. Fuller's object was to obtain the appointment of "a committee to undertake the investigation of Therapeutic subjects;" and the imbecility, impotency, and absolute bewilderment that now characterizes the condition of Drug Practice could not be depicted in livelier colours than he employed.

Investigation was desirable, Dr. Fuller alleged, because of "*our utter want of precise knowledge* respecting the *action of drugs*, and of the *doses* in which they may be safely administered." He says, "Scepticism as to the *curative value of* *drugs* is the *besetting fault (?)* of the profession at the present time." "Medicines, consequently, are prescribed which, either in their nature, or mode of administration, are ill-adapted to the exigencies of the case, *failure necessarily follows* their use, and scepticism as to their curative value is the necessary result." The extraordinary admission is made—"we *know little* respecting the natural cause of many diseases, and consequently we are *in the dark* as to what may be effected by the *vis medicatrix naturæ;* but observing, as we *often do,* that patients recover under *various,* and the *most opposite* modes of treatment, and even when *no medicine is administered,* we are naturally inclined to ask whether *drugs are of any use,* and whether they *may not be hurtful.*"

This exactly corroborates the opinion expressed by Dr. Edward Johnston; and is it not marvellous, that while Drug Doctors are thus confessedly *in the dark* respecting the value and action of their drugs, they notwithstanding persist in their reckless administration? Dr. Fuller proceeds thus—"Again, it *often happens* that drugs are given for the relief of disease over which they exercise little or no influence; or *appropriate* drugs are given when the system is in a condition ill fitted for their reception; or they are given in doses inadequate to restrain the violence of the attack!" This is quoted to show how miserably skilled practitioners are, even in the administration of their own poisons, which Dr. Fuller has yet to learn can never in the nature of things, be "appropriate," in any doses to any form of disease.

Yet, while Dr. Fuller censures the non-appropriateness of drug-administration, he makes this astounding confession of professional impotency and imbecility on the subject. "At present *we are absolutely without data for the administration of medicine;* the profession possesses no authoritative record of *a single therapeutic fact;* the traditions of our forefathers are handed down to us orally, or in the works of individuals; and we have these, together with our own experience, to guide us—

*nothing more.*" What the experience of practitioners generally is worth has been already shown. Again:

> "There are no authoritative statements as to the influence of *any method of treatment*, or as to *the action* of any remedy in the *Pharmacopœia;* and neither the College of Physicians, nor any of our medical societies, has made the slightest effort to obtain such a record. . . . . . We have no public or authoritative statement respecting the *doses* in which *any medicine* can be given *with impunity*, nor the disorders in which it proves useful; and, therefore, most practitioners *do as they have been taught*, and oftentimes have no knowledge as to its administration in any other doses. . . . No person who has not made inquiries on the subject can have any idea of the *wide discrepancy* which exists, between the *practice* of different men, in relation to the *doses* in which remedies are administered. *Ignorance respecting drugs and their actions is so general*, that in the absence of authoritative statement on the subject, the vaguest and most groundless fears are entertained respecting their action."—*British Medical Journal*, Feb. 26, 1868.

Could there be a more convincing confession of the vain pretensions of the Drug School of Physic than Dr. Fuller thus favored the Harveian Society with? What a sorry burlesque on the grand claims of physic to the exactitude of a science! More than two thousand three hundred years ago, Hippocrates flourished, and laboured to place Therapeutics on a rational and natural basis; yet here we have learned Physicians meeting in solemn conclave, confessing their utter ignorance of Therapeutics, notwithstanding all their boasted "drug remedies," and appointing a committee to investigate the subject!

In the discussion that followed the reading of Dr. Fuller's paper, no two members appeared to have similar ideas about disease, drugs, or therapeutics; yet all seemed to be quite well satisfied with their own practice. Dr. Broadbent thought "the natural history of disease the first great problem to be ascertained." . . . "The majority of men had never seen the natural course of a disease." . . . "As it is, remedies come into fashion, die out, and come in again. Remedies come and go, because men have *no guide* as to their real value except the opinion of the introducer." Are there not infallible guides to their non-value?—guides that clearly and unequivocally lead to the conclusive condemnation of all Drug Medication as worthless and mischievous?—guides that unmistakably indicate nature and natural agents as alone valuable and reliable in the treatment of disease? But such guides drug practitioners will not follow, although their reckless experimentalism, at the expense of human life, invariably tends to demonstrate the complete fallacy of their drug theories.

Dr. Sutton, who followed Dr. Broadbent, admitted this. "Extensive and valuable experiments," he said, "have often been made with remedies, and certain results arrived at, which have been afterwards *completely upset* by finding that the disease over which the remedies were *supposed* to exert an influence *ceased just as soon without them*. He had seen a very large number of cases of pleurisy with effusion *recover without any medicine* at all; so with pneumonia; in cholera, too, under *the most opposite plans of treatment*, a certain number of cases recover"—that is, Nature effects a cure in spite of doctors and their variety of drug remedies!

But while thus admitting the total uncertainty of Drug remedies—the utter helplessness of Drug practitioners in the presence of serious disease, and indirectly acknowledging the transcendent superiority of Nature—neither Dr. Fuller nor any one of his associates hinted at the propriety of bestowing a thought on *natural Therapeutic Agents!* Content to continue groping about bewildered in the darkness of their own wilful ignorance, still hoping against hope for some fortuitous gleam of remedial light, there was nothing but a monotonous reiteration of drugs, drugs, drugs, and a piteous bewailment of the want of precise knowledge concerning their actions! What hope can be reasonably entertained of improvement in Medicine while such a spirit of perverse adherence to an irrational system rules in the profession? There are none so blind as those who will not see, and really there is no hope save in the awakened intelligence of the public. Drug Doctors will continue to plod on contentedly, not ashamed to confess utter ignorance about the action of drug poisons administered daily, unconscious, perhaps, if not regardless, of the mischief inflicted—satisfied to do as they were taught, and follow blind-fold in the ways of their predecessors. Verily it would seem that

> "Ne'er did old Faith with her smooth bandage bind
> Eyes more devoutly *willing to be blind*."

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## SECTION VI.—*The general character of Medical Practice—High authorities quoted—Successive variations—Conscientiousness no palliation for the evils caused by Drug Practitioners—Perversity of medical men in rejecting natural Therapeutic Agents—Their revival and successful progress notwithstanding medical opposition—Honest inquirers become zealous advocates—Conclusion.*

FROM the evidence which has been adduced—and it could easily be increased to almost any extent—the conclusion is irresistibly forced on the mind, that the general character of medical practice is essentially speculative and necessarily dangerous. As Dr. Bostock, a highly-esteemed authority, has declared:—"*Every dose of medicine given is a blind experiment upon the vitality of the patient.*" It becomes, therefore, a serious matter when it is considered that there are some twenty thousand members of the medical profession in the United Kingdom, nineteen-twentieths of whom are actively engaged in the pernicious administration of Physic, or in making *blind experiments* on the *vitality of their patients!* Of how many of the twenty thousand could it be truthfully affirmed that they are "duly qualified" to administer physic-poison even with ordinary safety as regards health and life?—of how many would it be calumnious to declare that they are virtually pretenders to knowledge and skill which they do not possess, and in so far rank no higher than veritable empirics in practice—sacrificing to their false system innumerable credulous victims?

This is not the language of exaggeration, as the evidence already given fully testifies. It is more than justified by the declarations of additional medical authorities who know the profession well. "Charlatanism," says the *Medical Critic and Psychological Journal*, "is by no means confined to illegal practice. *To see the fullest-fledged charlatanism we need not go beyond the bounds of the profession.* The most refined quacks stalk under cover of a legal qualification." "The Profession," observes one of its most esteemed members, Dr. Wilks, of Guy's Hospital, London, "is not injured by Morison or Holloway, *but by those ten thousand worse charlatans*, who, under sanction of the law, are eating away our vitals. Let us look to ourselves; the disease is an internal one."

Thus we have superadded to the essentially destructive character of Drug Medication in itself, a reckless charlatanism in practice, that necessarily increases its destructiveness. There is nothing settled and fixed in practice, and hence, says Sir Wm. Hamilton, "the history of medicine is, on the one hand, nothing less than a *history of variations*, and on the other, only a still more marvellous history of how every successive variation has, by medical bodies, been first *furiously denounced*, and then *bigotedly adopted*."

Now, what do such "*successive variations*" in the practice of physic really mean, but a successive variation in the modes employed for putting patients to death? Is not this an irresistible conclusion? Nay more, it is a conclusion insisted on by the highest medical authorities! "I am incessantly led," said Benjamin Bush, one of the most celebrated physicians of America, "to make an apology for the *instability* of the *theories* and *practice* of physic. Those physicians generally become the most eminent who have most thoroughly emancipated themselves from the tyranny of the schools of medicine. Dissections daily convince us of our *ignorance of* disease, and cause us to *blush at our prescriptions*. What mischiefs have we not done under the belief of *false facts* and *false theories!* We have assisted in *multiplying diseases;* we have done more—we have *increased their fatality!*"

Another high authority, Dr. Coggswell of Boston, with equal candour observes—"I wish not to detract from the exalted profession to which I have the honour to belong, and which includes many of my warmest friends; yet it cannot answer to my conscience to withhold the acknowledgment of *my firm belief*, that the medical profession, with its prevailing mode of practice, *is productive of more evil than good*, and were it *absolutely abolished*, mankind would be *infinitely the gainer*." Thus—

> "Physic! a freak of times and modes,
> Which yearly old mistakes explodes
> For new ones still absurder.
> All slay—their victims disappear,
> And only leaves the doctrine clear,
> That killing is no murder!"

"We speak of things which we daily witness," says the *British and Foreign Medical Review*, January, 1838, "and the effect on our minds is, the growing up of a belief, to which every year adds strength, that not a few invalids are *annually destroyed by mal-practices*, for which, if there is no moral excuse, *there is, unfortunately, no legal punishment*." In 1846, Dr. Sir John Forbes declared—"One of the besetting sins of English practitioners at present, is the habitual employment of powerful medicines, *in a multitude of cases that do not require their use;* mercury, iodine, colchicum, antimony, drastic purgatives, and excessive blood-letting, are *frightfully misused in this manner*."

In January, 1861, the *Medico-Chirurgical Review* said:—"Would that some physician of mature experience had opened the academical year by *a grave, unsparing exposure of the practices now in vogue*, of poisoning the sick and feeble with food, which in quantity they vainly strive to digest, of spoiling blood that is healthy, of killing that which is disordered, of maddening the brain by wine, beer, and brandy without stint—thus quenching the intellect in its *last expiring rays*, *forestalling the unconsciousness of death*, and dismissing the patient *drunken from the world!* This is but a reaction, we are told, from *the* *opposite extreme* of ten, twenty, thirty, or forty years ago—an *equivalent of slaughter* in compensation for *the countless thousands who were then bled, purged, and starved to death!* In this balance of destruction, the result is one of small value to the statistician—to the physician it is a *double shame!*"

Thus every phase through which medical practice passes—every "successive variation" is alike destructive! "*Less slaughter*, I am convinced," says Dr Reid, in his *Essays on Insanity and Hypochondriasis*, "has been effected by the *sword* than by the *lancet*—that minute instrument of mighty mischief." And with respect to the *wholesale destruction* of infantile life, by drugging, he delivered his opinion with equal emphasis—"Of the cases of mortality in the earlier months of our existence, no small proportion consists of those who have *sunk under the oppression of pharmaceutical filth.* More infantile subjects in this metropolis (London) are, perhaps, diurnally *destroyed by the mortar and pestal*, than in the ancient Bethlehem *fell victims in one day to the Herodian massacre!*" Subsequently, when Dr. Reid's judgment had been matured by more enlarged experience, so far from retracting this opinion, which had excited the displeasure of the "mortar and pestal" interest, he said:—

> "I wish that the years of experience and reflection which have since intervened had convinced me that the remark was destitute of foundation. . . . Infanticide, when perpetrated under the impulse of maternal desperation, or in the agony of anticipated disgrace, is a subject of astonishment and horror; but if a *helpless victim be drugged to death*, or poisoned by the forced ingurgitation of nauseous and essentially noxious potions, we *lament the result merely*, without thinking about the means which inevitably led to its occurrence. CONSCIENCE FEELS LITTLE CONCERN IN CASES OF MEDICINAL MURDER. The *ordinary habit of jesting upon these subjects in convivial or familiar conversation*, has an unhappy tendency to *harden the heart*, and inclines us *to regard with an inhuman levity those dark and horrible catastrophes* which too frequently arise from *professional ignorance or mistake!*"

In the contemplation of such a fearful state of things, it is nothing, indeed, to the purpose to allege, that Medical Practitioners are *generally* conscientious, humane, and benevolent, undertaking great labour for paltry remuneration, and highly disinterested in bestowing gratuitous services on the afflicted. Admitting this to be a characteristic of the profession, what relevancy has it to the subject under consideration? Does it make the practice of Physic less dangerous? Does it convert what is unnatural and false into what is rational and true? Sincerity is not a test of truth, and no amount of conscientiousness in adhering to the deceptions of an erroneous system can excuse the evil committed under it. Honest investigation to discover the truth, and an inflexible conscientiousness in following its teachings, is a primary duty that devolves on every medical practitioner; and no man is justified morally, and in the sight of God, in administering poisonous drugs to a human being, unless he has *a positive assurance that beneficial results will follow.* Mere conscientiousness, mere blind conformity to what he was taught, can never warrant a credulous trifling with human life.

When patients were deliberately bled to death by the physicians who flourished during the sanguinary era—a ruthless Phlebotomy then raging as the established system of Medicine; or when others were hurried to their graves in a state of intoxication by the "Brandy School" superseding the former, doubtless the great majority of the practitioners who thus "slaughtered wholesale," were eminently conscientious, but did that change the essential character of their practice? Did that make their killing less murderous?—less woful to the interests of society and the happiness of families? And so under all the various systems of Drug Medication that have prevailed, and equally under existing practice, drug poisons may be most conscientiously administered in firm reliance on a credulous hope that some good, or at least no evil, may result; but does that make poisons less poisonous?—does it enable the human economy to assimilate poison as nutritious food?—does it reconcile the natural antagonism which exists in Nature between what feeds and sustains, and what debilitates and destroys vitality? Does it, in short, justify, in the smallest degree, the murderous tampering with the functions of healthful life, which is inseparable from the practice of the Drug System?

The conscientiousness of practitioners, no more than the ignorance and credulity of patients, cannot be pleaded to extenuate, let alone justify the ill deeds of a vicious system. As Dr. F. R. Lees forcibly observed—

> "If doctors and patients will not *investigate* and *think*, patiently and accurately, there is no help for it; the *punishment*, the penalty of transgression, must follow inevitably and inflexibly; and men will be bled or blistered, purged or stimulated into disease or premature death, to the end of the chapter. When a person cants to me about the conscientiousness of his motives, I tell him *that* does not prevent the unpleasantness of the results of mistaken action. A delusion and a lie are not ameliorated one jot by any amount of negative conscientiousness—which, in the majority of instances, is resolvable into intellectual laziness, mental whim, self-interested feeling, or pleasant and comfortable gratification.
>
> "No man is really conscientious—no man fulfils the first law of his rational and moral nature—who does not *think* as the means of ascertaining that Divine Truth and Will which regulate all mortal destiny. Declining this, suffering is the sure consequence to himself or others, since that is the ripened fruit of transgression, whether wilfully or unwittingly done. It is, therefore, nothing to the purpose to allege, on the part of either patient or physician, that a *conscientious opinion* is at the bottom of the practice. Such a supposition is a simple impertinence, interposed between our duty and God's Truth."

There are a vast body of practitioners, however, who have not even the plea of conscientiousness to screen their malpractices, for no man can be considered truly conscientious who wilfully neglects the means of investigating and judging correctly, or who presumes to condemn what he has not inquired into, and does not therefore understand. As the same author observes—"There are Doctors who, never contemplating Medicine as a Science, never seek to realise any advance of that kind. Like the horse in the bark-mill, they go the allotted round, and never advance; contracted in their education, or learning merely by rote, they pursue the practice that happened to be in vogue during their pupillage; or, if given to change, adopt the last system of Medicine that may be in fashion." Such, he describes as the "ruck and run of the profession," from whose imbecility, or incompetency, or thoughtlessness, or dishonesty, the interests of society suffer so fearfully.*

Such practitioners, and they constitute unfortunately the bulk of the profession, follow medicine as a "mercenary trade;" and it was the contemplation of their practice that warranted Dr. Forth in saying—"*There is scarcely a more dishonest trade imaginable than Medicine in its present state.*" If an intelligent public were only familiar with the confessions and lamentations on this point with which the medical press and medical literature generally abound, they would have their blind faith in the honesty and salutary effects of medical practice terribly shaken. But few outside the profession read medical journals, or trouble themselves with medical works; hence such practitioners, secure in public ignorance, and screened from public criticism, unhesitatingly pander to the errors and credulities of patients, and remorselessly stick to whatever they fancy pays them best.

Nor is this all, for when reproached with so basely trading on an honourable profession, they unhesitatingly answer—"It is necessary to do so, or abandon practice altogether! The public love to be cheated—truth and honesty would not pay—so if we don't humour for our profit the frailties and foibles of patients, there are plenty who will do so!" Such is the ordinary pleading that prevails on the subject:—

> "A physician," says Dr. Markham, "who dealt out *simple truth* to his patients would probably very soon cease to have any patients to deal with. We are accused of dealing in *fearful polypharmacy with our patients;* but the truth is, in nine cases out of ten, it is the patient who demands these many remedies. He wishes to feel that something is being done for him. He cannot in any case understand that the *quiet, unseen, all-powerful operations of Nature are sufficient to work his cure.* . . . The quackeries of the country, whether medical or otherwise, are mainly patronised by what are called the educated classes—a fact which may be fairly ascribed to the want of a proper instruction of these classes in the physical laws of the universe. The quack thrives on the crass ignorance of the public, and on their love of being cheated, provided it be in the direction which suits their wishes."—*British Medical Journal*, Jan. 19, 1861.

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* Inquiry into the Prescription of Intoxicating Liquors in the practice of Medicine, p. 27.

This is retorting the ignorance of the "educated classes," their credulities and vitiated feelings, fairly enough on themselves, yet after all it supplies but a sorry excuse for the practice of the "fearful Polypharmacy"— the systematic empiricism, of which medical practitioners make them the dupes and victims.

In the same paper Dr. Markham says—" *We can hope for no great change in this state of things until the high Academies of the country teach the ingenious minds of their disciples, and learn themselves, something about the laws of animal bodies.*" The absolute necessity for such teaching has been already noticed, and until, at least, the leading truths of Physiology enter into the curriculum of general education, the so-called "educated classes" will never be rescued from the deplorable ignorance concerning the laws of Health, which is now their reproach—an ignorance not less profound than lamentable, for it involves the sacrifice of many thousands of valuable lives annually.

But how can the want of such teaching in "the high Academies of the country," and of such knowledge on the part of the "educated classes," excuse the admitted and notorious *inertiæ* of Medical Schools and Colleges respecting their own teaching?—or can justification be pleaded on such grounds for the dogged tenacity with which the truth-defying prejudices and superstitions of erroneous systems are still adhered to, and the inveterate hostility with which proved and recognised Therapeutic Agents are scandalously cried down?

Let the imperfections of general education, and the ignorance of the "educated classes" be what they may, the shortcomings of the one, and the stolidity of the other can never excuse the studied empiricism of Medical teaching and of medical practice. Besides, what makes matters worse is the glaring fact, that no medical practitioner of scientific eminence is now to be found who professes a firm faith in Drug Medication, yet, with a few honourable exceptions, all practice it, and encourage the pernicious delusions connected therewith--while all are equally unanimous in contemptuously ridiculing and rejecting natural Therapeutic Agents, the remedial virtues of which have stood the tests of scientific and matured experience.

Dr. Markham, however, is justly entitled to honourable commendation for the frank and philosophic spirit in which he has exposed and reprobated the moral delinquencies of the Profession in this respect. Animadverting on the prejudice, bigotry, and intolerance of truth, manifested by practitioners at large in dealing with the great unrivalled Therapeutic Agents of Air and Water, modified by Temperature, in the treatment of disease, he says:—

> "We suppose that not one of us, however legitimately inclined, will deny that *there are curative powers, much good, great medicinal virtues in water as applied hydropathically to the human body.* . . . But how has the Profession met this offered addition to its therapeutic store? *We are bound to say that it has snubbed the thing.* Instead of extracting the good out of the proceedings of the '*Silesian peasant,*' as we pleasantly call Mr. Priessnitz, we at once despatched him and his water-cure proceedings to the central limbo of all quackeries. Medicine contemptuously turned from the article, and walked by on the other side. Instead of *carefully investigating* the strong *prima facie* facts of the case, *as it was bound to do,* and publicly declaring, after due inquiry, that the thing was, in the eye of the Profession, either good, or useful, or hurtful, Medicine simply pitched it, like a bone, into the mouth of what it considered to be a score of outsiders. *We see the result, and have our just reward.* There was undoubtedly *a truth* in the thing, *a virtue, an excellence;* and the Profession had not the wit—shall we say *the honesty*—knowingly to distil it forth.
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> "Just the same thing has it done in the matter of the Turkish Bath, admittedly, for good or evil, *a most powerful medicinal agent.* Instead of coming forward as it should do, *if it were a true guardian of the public health;* instead of assuming the initiative, accepting or rejecting, or explaining, authorising, and regulating the use of *this powerful agent,* it passes by, as it has often done, like the proud Levite, and so again lets *a grand therapeutic agent* fall into the hands of joint-stock companies and clever enthusiasts.
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> "And yet—curious fact!—let only some fortunate discoverer announce a *new drug,* or a 'more elegant preparation' of an old one, as a capital cure of that sort for some *incurable* disease, *and the whole profession rushes to the trial of its virtues* (no matter how many deaths may be caused by their poisonous experimentalism!); and for about six weeks or so, the journals abound in cases, demonstrative proofs of its efficacy and superiority over everything which went before it in that way. With all this *eagerness for novelties* and *new fashions in drugs,* we let the water-cure, the

Turkish bath, and such like energetic remedies, down the wind, for fortune to play with. *The fact is not creditable to us.*

"We may clothe ourselves in broad phylacteries, and, with well-sounding periphrase, loudly inveigh against the abominable trickeries of charlatans, the unprofessional proceedings of what we term irregular practitioners, and the ignorance and gullibility of the world; but *what a miserable subterfuge this is*, when all the time we ourselves, through our sins of omission, have been the original promoters of the quackery and of the irregular practices."—*British Medical Journal*, Nov. 9, 1861.

Yet, while the profession has thus contemptuously despised acknowledged Therapeutic Agents of marvellous potency, its members, high and low, are perpetually squabbling among themselves about the very nature of disease!—they are fretting their idle hours upon the stage of life in concocting and wrangling over speculative fancies about a "change of type in disease," thinking by such solemn buffoonery to screen the radical inconsistencies of their own varied systems of practice, and the superlative ignorance which is demonstrated by their never-ending alternation—each being in diametrical opposition to its predecessor! Thus, while groping about helplessly in the dark, in the silly expectation of stumbling upon some new drug that may prove less delusive than any the pharmacopœia yet contains, they occupy, as a Profession, the humiliating and pitiable position of being *confessedly powerless in the presence of serious disease*, for in their mere art of medicine no sensible advance has been made during the last three thousand years!

There are better Anatomists, more accomplished Surgeons, more profound Physiologists and Pathologists in the profession now than in ancient times—immense additions have been made to *Materia Medica*, and a portentous medical nomenclature has been fabricated—more is known about morbid symptoms, and the shelves of libraries groan under the weight of voluminous disquisitions on the "principles and practice of medicine"—Chemical analization and metaphysical logomachy have been carried to a complexing and perplexing extent, dividing and sub-dividing, classifying and re-arranging a formidable catalogue of diseases, overloading and obscuring medical literature with a speculative and misleading nosology, making "confusion worse confounded"—in all this, moderns can boast a marked superiority over the simple-minded ancients who were wisely content to follow Hippocrates, and seek truth in Nature; but no proportionate progress has been made in advance of the curative and prophylactic knowledge which they possessed.

The profession, in this most essential respect, is tossed on the billows of doubt, even more helplessly now than in the days of Hippocrates, and this truth its most distinguished authorities frankly admit and feelingly deplore! The Professors of mere Physic in their search after specifics and panaceas have been, thriftlessly, though sedulously, engaged in the pursuit of phantoms, and for centuries have senselessly devoted themselves to the slavery and toil

> "Of dropping buckets into empty wells,
> And growing old in drawing nothing up!"

The principal, if not indeed, the sole cause of all this labour in vain must be looked for in the fact, that it has all been employed in a *wrong direction.* Medicine has never been completely emancipated from the gross superstitions with which the artifices of the priest-physicians contaminated it, nor from the no less pernicious credulities and absurdities of what passed for "Christian Philosophy," but still remains tainted to the core with irrational notions about disease—with the extravagant pretensions and ridiculous aims of the Alchemist, who sought in his crucible for the Philosopher's stone, with as much misplaced confidence as the modern Physician looks to the Pharmaceutical Chemist for the discovery of some miracle-working wonder in the shape of a specific or panacea! But such day-dreams are never realized. It is against the laws of Nature that they should be; and so medical practice is content to go on travelling hopelessly in a vicious circle—manipulating drugs, and applying substances "of which they know little, to bodies of which they know less," but certain, at all events, to aggravate disease and facilitate the approaches of death.

He would be a silly horticulturist who would seek to gather "grapes of thorns, or figs of thistles." Yet this is perfectly analagous to the system Drug Doctor's pursue—they expect by a chemical process to obtain from natural poisons healthy food —to extract from what is absolutely destructive of animal health and life, some mysterious preparation that will work miracles in restoring disordered functions, and correcting all abnormal conditions. In this unnatural and unphilosophic pursuit, they have been engaged for centuries, and the will-o'-the-wisp is as far from their grasp as at starting—simply because it would be against natural law that their vain and whimsical speculations and pursuits should ever be rewarded, otherwise than as demonstrative of their own superlative folly. When men *do* "gather grapes of thorns, and figs of thistles," then, indeed, we may expect such a convulsion and revolution in nature, as will enable Drug-doctors to convert mineral and vegetable poisons into health restoratives, but most assuredly not till then.

Yet, from the age of Hippocrates downward, there have been a succession of rational minds who regarded Nature as the only safe and certain guide in the treatment of disease, and though they were unable to make their teaching prevail in opposition to the powerful interests that centre round ignorance and superstition, still their doctrines were true, and have survived to receive scientific confirmation and practical development in our own more intellectual and free age. There is now, happily, established among us, in despite of medical opposition, and in irreconcilable hostility to the empiricism of medical schools, a truly sound, philosophic, and rational system of Hygiene and Therapeutics, based on nature. It is a system that appeals to none of the weaknesses and infirmities of humanity—that does not seek to sustain itself by basely pandering to depraved tastes or vitiated appetites—that places no dependence on the Chemist's laboratory, or on the Apothecary's skill in combining poisonous ingredients, but that, addressing the reasoning intellect in the language of truth, makes available for its high mission the pure and simple elements which Providence designed for the sustentation of life. Air and Water, modified by temperature, with ordinary Hydropathic appliances, are the primordeal elements of this system, by the judicious application of which the resources of an incomparable agency are placed at the disposal of the scientific practitioner,for the preservation of health, and the alleviation of disease.

It is now eleven years since, by the establishment in Ireland, by Mr. Barter, of the Bath known as the "Roman" or "Turkish," the key-stone was placed in the arch of scientific Hydropathy. Air, Water, and Heat are the natural elements employed in the Bath, and, in combination with other Hydropathic agents, as *diet*, *regimen*, *&c.*, constitute a matchless Hygienic and Therapeutic power, the principles of which, it is true, were, to some extent, known thousands of years ago, and survived the ruins of mighty empires; but the difficulties in the way of their perfect and systematic development were insuperable, in consequence of the extreme ignorance that prevailed until recently concerning the physiology of life.

Dr. Markham has justly censured the unphilosophic spirit in which the Medical Profession, false to its duties, received the introduction of this grand agency. In the same spirit the labours of the illustrious "Father of Medicine" were received by the ignorant and purblind physicians of his day. Great minds and glorious discoveries have been doomed in every age and country to meet with a similar reception. Every distinguished genius who has explored unknown fields of science for the benefit of mankind—like the Harveys and Hallers, the Hunters and Bells, the Galileos, Newtons, and Franklins, in medical and physical science—has experienced the envy, malice, and ingratitude of his contemporaries. So universal has the rule been, indeed, it almost appears to be an inflexible law, that an ordeal of detraction and persecution, more or less active, is the destined trial through which whatever is true and useful must necessarily pass. Why, then, should The Bath and its introducer, Dr. Barter, escape?—why should Priessnitz be otherwise treated than by scornful allusion to "the illiterate

Silesian peasant?"—why should the eminent professional men who, roused by his example, had the scientific aptitude to study his practice, and, finding it true to Nature, succeeded in giving it scientific development, be exempt from the penalty that has been entailed on all independent inquiry and conscientious devotion to truth? Educated in "Orthodox" Physic Schools, the founders of British Hydropathy were fortunately blessed with intellect capable of investigating for themselves, while they had the moral rectitude and courage to imperil their professional position and prospects in following those convictions which their honest questioning of Nature had brought home to their minds. The gradual building up of scientific Hydropathy was bad enough as an innovation on traditional routine, but to crown the edifice with The Bath, was presumption unparalleled! No wonder, therefore, that The Bath did not receive honest treatment, let alone cordial welcome from a profession that has ever been distinguished for the unscrupulous malignity with which it has persecuted whoever sought to correct its ignorance —to extend its knowledge, and to improve its practice.

It is consolatory, however, that anything which has its foundation in nature is, therefore, sustained by truth, and is imperishable. It may be misrepresented and traduced—every evil influence may be arrayed against it—the ignorance and presumption of the illiterate practitioner may combine with the prejudices of the learned, the bigotries of the collegian, and the intolerance of the dogmatist — professional monopolies, trembling for vested rights, and mercenary interests in what is erroneous and scandalous, but profitable—all may unite to retard progress for a time, and alarm an ill-informed public against what is beneficial, yet, after all, it is but "kicking against the pricks," for what is natural and truthful cannot be cried down. And so with The Bath—attempted to be misrepresented and lied down at first, the demonstrations of scientific experience have now established its unapproachable superiority over all other known agencies in the treatment of disease.

It is a singular fact, that so incontestible are the merits of

*The Bath*—so easily are they ascertained, and so readily appreciable—that the few worthy members of the profession who honestly inquired before venturing to hazard an opinion, who, desirous of arriving at the truth, put aside preconceived notions and theories, determined to investigate rationally for themselves; all arrived at the same conclusion, all united in pronouncing its introduction as fraught with inestimable blessings to society. There is no instance of any one who fairly studied and tested its merits, and yet found himself unable to cordially agree with the eminent Physiologist, Erasmus Wilson, in welcoming it as "a boon to humanity."

On the other hand, those who have figured as opponents of The Bath, are men most exclusively identified with the practice of Pharmacy—with the trade of Drug Medication. Though enjoying various degrees of repute and position, they are all alike distinguished for having first pronounced an adverse opinion in accordance with their preconceptions or fancied interests, and then casting about to find some plausible reasons to sustain their hostility. The opinions of such men, no matter how successfully their professional trade may have been carried on, are utterly valueless. As Dr. Chalmers remarked—"it is a very obvious principle, although often forgotten in the pride of prejudice and controversy, that what has been seen by one pair of eyes is of force to counteract all that has been reasoned or guessed at by a thousand human understandings."

The facts of The Bath are exactly in this position. The opinions of a thousand practitioners, however arrogant they may be through successful trading on public credulity, are not worthy of one moment's consideration in comparison with the actual experience of those who have tested and proved the remedial powers of The Bath, and that, too, after suffering under every variety of Drug treatment for years, and gorging with fees the very "lights of the profession," who refused to make those powers available. Individuals who are interested in error, will never voluntarily go in search of truth, or welcome it when obtained, and practitioners who make a profitable livelihood out of prescribing drugs to credulous patients need never be expected to voluntarily recommend The Bath in preference to the apothecary. It was not a belief in her divinity that impelled the silversmiths to shout—"Great is Diana of the Ephesians!" They knew that if her silver shrines were overthrown their craft, by which they had much profit, would suffer; and in the same way, though Doctors prove, by practice among themselves, that they have no faith in the divinity of Drugs, still no rational man need look for such a miracle as a thriving Apothecary, or a Physician who prospers by the same means, recommending *The Bath* in opposition to their own interests. The intelligence of the public alone must work this blessed change.

It is only necessary, however, that the properties of The Bath should be really understood to ensure its general adoption by an intelligent public, for, as honest medical authorities of the highest eminence have testified, it is no sham—no trading false pretence, but the most powerful, safe, and unerring Therapeutic with which Nature or Art has made us acquainted. Its elemental simplicity and natural action place it in uncompromising antagonism to all empiricism—to the puffery, the mystery, and the deceptions by which the drug system has ever been sustained. Were it, indeed, like the quack medicines styled "patent," or any of those noxious compounds which the Profession patronise to amuse credulous dupes, until the fashion of novelty wears off and new delusions are substituted—were it thus empirical in its nature, means, and practice, then, in truth, it would not have been decried, misrepresented, and sought to be strangled in the infancy of its establishment.

But in one respect the opposition of the Profession has been productive of good; it has compelled The Bath to take its stand on its own merits. Had the Profession, as Dr. Markham censured them for not doing, adopted it when first announced, the chances are, they would have so allied it with druggery—so chained the living and the dead together, that its character would have been compromised and its utility destroyed. As it is, The Bath now stands alone on its own merits—a great natural and acknowledged power—and its glory is that, like truth, it can enter into no dishonest compromise with error, and thus its very existence must always be a standing protest against the baneful errors of Pharmacy, while by its successful progress alone can society be emancipated from the cruel slavery and suffering necessarily co-existent with drug practice.

The public generally should understand that the utility of The Bath, or of Hydropathic practice, is not so much a question of science as of common sense. True, it appeals to science by its harmonious concordance with the unerring laws of Nature, and the congruity of its action with the vital functions of our nutritive organism, but it appeals not less confidently to the evidence of rational experience—to the irresistible logic of sensation, of well-ascertained facts. When Dr. Johnson was asked how he could reply to a sophistical metaphysical argument to prove the non-existence of matter, he lifted his big foot, and, stamping on the ground, sturdily exclaimed—"Sir, that's my reply." It was the demonstration of sensation, rationally applied, in opposition to metaphysical sophistry; and so with The Bath, Doctors may conjure up a thousand evils as likely to arise from its use; but the experience of benefits invariably received is certain to outweigh them all. When fairly, fully, and consistently tested by this philosophic standard, The Bath never can be found wanting, because, in all cases, susceptible of relief by human means, its invariable action, when properly administered, must prove beneficial, for Nature cannot err.

Let it not, however, be supposed, for a moment, that any intention exists to fall into the inconsistent and absurd superstition cherished by the Drug School, and represent The Bath, or Hydropathy, as a catholicon or panacea. Very far from it. There is not in Nature any sovereign remedy for all diseases, save the avoidance of their causes; but this, at least, is certain, that, as far as scientific inquiry has extended, and as far as the unerring evidence of enlightened and verified experience warrants a decided conviction and justifies its candid expression, The Bath can be most advantageously employed in *all* diseases; and that, in cases where its curative properties are rendered powerless by the malignancy of organic or other derangements, it is still capable of exercising a most salutary and soothing influence as a demulcent, in abating the virulence of morbid action, and alleviating, *as nothing else can do*, the misery of human suffering. To this rational extent and no further the use of The Bath is advocated. Could the Drug School follow as far, then, indeed, physic practice would not be what those most familiar with its practice admit it is—a pretentious and pernicious sham!

From what has been now said, the case may be considered as fairly stated between the antagonistic and irreconcilable systems of Drug Medication in the treatment of disease, and of Hydropathy, of which The Bath is, at once, the perfection and glory.

The evidence given respecting the state of the Medical Profession will serve to clear away many delusions, and lead to a more correct estimate than usually prevails concerning the capacity of its members to deliver dispassionate, unbiased opinions in condemnation of whatever is opposed to the practice they are identified with. By candidly considering these points, the intelligent reader will be better enabled to exercise his own free and independent judgment on the contents of this work, and the merits of the system it is designed most earnestly to recommend.

Every man is surely far more deeply interested in whatever tends to the preservation of his own healthy well-being, bodily and mental, than any Doctor possibly can be? Doctors, after all, are just like other men. They have the same infirmities as their neighbours, are influenced by the same motives, and moved by the same impulses, while they are necessarily tainted with the proverbial instincts of professional or class interests, besides being so largely and powerfully swayed by the prejudices of education. It cannot, therefore, be reasonably expected that men, as a body, who make their living by Drugs, should be very anxious to destroy, or see destroyed, public faith in their fabulous efficacy. Their hostility, therefore, to the reception of Natural Agents, the beauty and simplicity of which their interests and prejudices will not permit them to comprehend, might be excusable enough, were anything less serious than health and life concerned.

There are, however, in the Profession, minds superior to its prejudices and sordid interests, and their opinions are deserving of respectful consideration. The judgment in all such cases is finally with the public, and most assuredly it is the duty of an intelligent public to read, reflect, and judge for themselves.

# CHAPTER II.

*The term "Hydropathy"—Its accepted meaning—Hydropathy a Science—Its agents irreconcilable with those of the Physic School—Mineral Poisons unknown in ancient Medicine—Their introduction by Paracelsus—Hydropathy as practised by the Ancients—Hippocrates, his use of Hydropathic agents—His successors, the Greek and Roman Physicians—Use of cold water in disease in Africa, Asia, and Europe—First works on Hydropathy in the sixteenth century—Progress during the seventeenth century—Practice general over Europe early in eighteenth century—Its great curative success—Decline of its practice—Again revived at the close of eighteenth century—Dr. Currie and other Hydropathists—Opposition of Medical Practitioners—Again falls into disuse—Revival by Priessnitz—Rapid extension over Europe—Its success and permanent establishment—Authorities confirmative of its principles and practice.*

THE term Hydropathy, which is a corruption from Hydro-Therapeutics, is now generally employed to signify *the systematic application of water in various ways to the treatment of disease.* The term, however, is neither scientifically correct nor appropriately expressive; but, as it is now naturalised in our language, it is important to understand clearly what meaning it is intended to convey. It must not, then, be considered in so limited, imperfect, and deceptive a sense as being merely synonomous with the phrase "water-cure;" because, as now scientifically developed, Hydropathy has a far more comprehensive signification It is a System—a Science, that has had its rude and imperfect beginnings like Surgery, Astronomy, Chemistry, and other great systematised departments of knowledge, which now so largely contribute to the elevation and happiness of mankind. A writer in *Chambers's Encyclopædia* with truth observes:—

> "From a variety of circumstances the system of Hydropathic Medicine has been greatly misunderstood and misjudged by the general public. For one thing, the name water-cure or Hydropathy, adopted by Priessnitz, has been very prejudicial, as leading to the false inference that *one element* alone constitutes the bone and marrow of the system, playing the part of a panacea for every form of human ailment. *Such a notion has never been maintained by the practitioners of scientific Hydropathy*, and it is matter of regret that some more comprehensive and catholic title, as that of 'Hygienic Medicine,' has not long since been adopted."—*Art. Hydropathy.*

Hydropathy, in its comprehensive sense as a science, is at once Hygienic and Therapeutic. It embraces not the use of *water alone*, but the employment of *all natural agencies whatsoever* that tend to the preservation of health, and the relief of mental or bodily derangements. It thus covers the *whole ground* pretentiously claimed to be within the peculiar and exclusive domain of "Practical Medicine" as regulated, professed, and practised by Physic-Doctors. The means it employs are called *natural*, because they are in harmony with the inflexible laws that govern the human economy, and, therefore, are in contradistinction to the means Drug-practitioners use, which consist in the unnatural and deleterious contrivances of Pharmacy—just as whatever nourishes vitality is called *food;* and whatever has a reverse action, and necessarily tends to impair or destroy vitality, is properly called *poisonous*. As the writer already quoted observes:—

> "The Hydropathic Physician avoids using all means *with whose effects he is not thoroughly conversant*, or which may, at least, interfere with Nature's own operations. Hence, as a rule, *he eschews the use of drugs*, and betakes himself to those more simple natural agents which, in their totality, receive the name of Hygienic.
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> "The conditions of health, as unfolded by physiology, may be briefly stated to consist of five necessary requirements—air, exercise, water, diet, and nervous repose. These are undeniably essential to the preservation

of health; no human being can possibly continue in a fair state of health when deprived of a just proportion of any one of them.

"This proposition, which may be regarded as axiomatic, forms the starting point of Hydropathy in the cure of disease. Admitted that certain agencies are necessary to the preservation of health, the Hydropathic principle is simply this, that the very same agencies, infinitely modified, of course, according to the requirements of each particular case, and generally much intensified, are not only *the safest*, but by far *the surest*, means of curing chronic disease; or to put it more correctly, are the best means which can be brought to Nature's assistance for enabling her to effect a cure herself."—*Chambers's Encyclopædia.*

Thus Hydropathy and Drug Medication are as wide as the poles asunder. In principle, as in practice, they are diametrically opposed, for the one works with natural agents that necessarily tend to preserve and nourish vitality—the other employs means that as necessarily tend to impair, exhaust, and destroy it.

On its revival forty years ago, Physic Doctors ridiculed and reviled Hydropathy. They represented it as a mere manual process, fitting only to afford occupation to the illiterate—just as for many hundreds of years they succeeded in imposing on the ignorant credulity of mankind, by representing Surgery in the degrading light of a servile art, which it would be derogatory for men of learning to practice. But now Surgery is a truly noble Science when followed as such, and Physic Doctors finding faith in their *medicamenta* growing less by degrees with the increasing intelligence of the public, are agitating for an amalgamation of interests with the Surgeons—the inevitable result of which would be to degrade a beneficent Science by associating it with an art essentially empirical. Pure and lofty in its own sphere and aims, it is the empiricism of Physic that, to a large extent, even now impairs the utility of Surgery, and corrupts its practice.

Somewhat similar is the treatment Hydropathy received from Physic Doctors—at first contemptuously spurned, a gradual change of tone took place during its progressive development into an acknowledged science, and then it was presumptuously claimed as forming a part of "Practical Medicine!" Writers on Medicine condescended to notice it with a patronising air, while truth compelled honest men to acknowledge its superlative merits. Thus, some twenty years ago, the ablest writer on *Materia Medica* of his age, Dr. Pereira, said:—

> "The cold water cure, or Hydropathy, though *not yet* admitted by the Medical Profession among the *legitimate means* which may be beneficially employed in the treatment of diseases, *undoubtedly includes powerful therapeutic agents*, which in the hands of the educated and honourable practitioner might be beneficially resorted to as remedial agents. It does not confine itself to the use of cold water only, but includes dry sweating, diet, exercise, and regulated clothing."—*Elements of Materia Medica*, vol. i., p. 33, third edit.

It might have been imagined, that a Medical Profession, composed of "educated and honourable practitioners," would have gladly hailed any means as "legitimate" that placed "powerful therapeutic agents" in their hands wherewith to alleviate the diseases and sufferings of patients. But Dr. Pereira testifies otherwise, and in so doing passes the severest condemnation on the profession it is possible to conceive. As time rolled on, however, the successful practice of Hydropathy began to work a marvellous change even among the bigoted adherents of "legitimate medicine." They discovered it was no longer politic to continue superciliously pooh-poohing "*undoubtedly powerful therapeutic agents*," whether their ignorance or prejudices deemed them "legitimate" or not. Such potent agents it was found could not be prudently ignored, and Physiccraft then sought to filch them and pervert them. They were all at once ascertained to be old medicinal agents—as old even as the age of Hippocrates. Then, indeed, the progressive part of the profession acknowledged their value, and made them very partially and imperfectly available in their practice, while the middle aged-bigots—like the generation of sages who, in Harvey's day, having attained the wisdom-age of forty, could never be induced to recognise the truth of his grand discovery of the circulation—continued to plod on in sulky enmity, lamenting the infatuation that could tolerate such sad innovations as the introduction of *undoubtedly powerful thereapeutic agents*, within the morbific sphere of "legitimate medicine"—agents, at once safe, cleanly, pleasurable, and salutary in the treatment of disease, and therefore incompatible with all the traditions, doctrines, and practices of the Physic School.

Fortunately, however, for the successful establishment of Hydropathy and the interests of humanity, there can be no alliance between its doctrines and practice and those of Physic. The two are essentially distinct and irreconcilably antagonistic. Nay, more, in the hands of Physic-Doctors who derange and torture the functions of life with their "pharmaceutical filth," the application of the natural agents of Hydropathy in the treatment of disease is fraught, in many instances, with positive danger. Of this fact the public should take heed. Patients, according to their intelligence and enlightment, may follow one system or the other,—that is their own affair, but both cannot be consistently or safely combined.

It will thus be understood that the term Hydropathy is not used in the narrow, restricted, and popular sense as implying merely what Dr. Pereira calls the "cold water cure," but in a high scientific sense, as including Air, Water, Temperature, and all the *natural means* Providence has designed for the sustentation of animal life, and the restoration of its deranged normal conditions. Thus understood, it will be interesting to trace the origin, progress, and development of Hydropathy in its two great divisions—*first*, as more particularly identified with the varied use of cold water in health and disease; and *secondly*, as more peculiarly identified with heated water, vapour, and air, the employment of which, it is reasonable to suppose, was originally suggested by the thermal springs that are to be found in every quarter of the world.

In considering the whole subject, it will not fail to strike the intelligent reader that there is no novelty in the discovery of such natural agents. Hydropathy has been ridiculed as an innovation, and misrepresented as a new-fangled device; but the means it employs have existed since the creation of the world; they have been used in various ways, in all ages, and in every country, and if their efficacy was but imperfectly known—if their incomparable merits in relation to health and disease were not adequately tested until within our own times, that was mainly owing to the repressive influences resulting from the ignorance, superstitions, and prejudices of the medical profession.

As Surgery never could by any possibility attain the proportions and dignity of a Science, while Anatomy remained a proscribed study, or while the surgeon was required to exercise his profession under the direction and control of his assumed superior, the ignorant Physic-Doctor, equally so was it impossible for scientific Hydropathy to exist while physiological knowledge remained "a lifeless, rude, and undigested mass" of speculations and assumptions. There is, then, no startling novelty—even were novelty a reproach—in the agents which Hydropathy employs, though, in their application to the varied phenomena of disease, there unquestionably is much very valuable novelty, though not in the sense Physic-Doctors would represent, which is alone applicable to their own destructive art.

Hydropathic agents were just as true to Nature four thousand years ago as they are to-day—just as sympathetic with the functions of vitality, and just as remedial in their influences on the abnormal conditions which constitute disease. There is no novelty in this respect. But how stands the case with the *medicamenta* of Physic-Doctors? Why just in this position—that for thousands of years medicaments were of the simplest kind, largely composed of or combined with *food;* therefore, in so far consistent with Nature, while it has been principally within the last three hundred years that the practice of constantly administering poisonous substances to patients became so universally established. This is matter for serious reflection, for, undoubtedly, with all their shortcomings, the ancients had a wisdom in this respect that contrasts strongly with the consummate folly displayed in yielding to drug superstitions which, excluding accidental causes, are responsible for more than three-fourths of the mortality of our day.

It is an unquestionable truth that the great bulk of the drugs—of the vegetable and mineral poisons which constitute the existing *materia medica*, were wholly unknown to the ancients, and are altogether of modern origin. The medicines prescribed by the ancients were purely herbal, in the form of syrups, decoctions, emulsions, confections, and such-like compounds. This continued to be the case in a great degree down to the sixteenth century. In Italy, in the eleventh century, the vendors of medicines were known as *confectionarii*, and the place where their material was stored was called *apotheca*, hence Apothecary. In the fourteenth century the Apothecaries were formed into one guild with the grocers, and continued so until the reign of James I., who, in 1607, granted a new charter to the combined bodies; but, in 1615, the Apothecaries, by subsidising the corrupt favourites of James, procured their own incorporation as a separate Company. From this dates the commencement of the terrible reign of poisonous Pharmacy, under which British humanity still helplessly suffers, languishes, and dies.

The first *British Pharmacopœia* was published three years after the incorporation of the Apothecaries—that is, in 1618; but it was comparatively barren in poisonous substances, though abounding in the most abominable and disgusting material, revolting alike to sense and decency. There was in this, as in every other respect, a marked departure from the purity and simplicity of Ancient Physic. It is quite true that the ancients were well acquainted with some active poisons, but it is equally certain that they used them as such, for the purpose of destroying life: they never attained to the superlative refinement of folly, that prescribed the swallowing of them under the delusion that they possessed curative virtues in disease. Such an outrageous superstition, so flagrantly inconsistent with the ordinations of Nature, and so repugnant to the dictates of reason, was left to be invented and cherished by the higher civilization and superior enlightenment of modern times!

It was only after the Alchemists had perfected the arts of distillation, sublimation, and such like processes, that Pharmacy grew into repute—the great founder of the Chemical School of Physicians, as contradistinguished from the Gallenists, being the most astounding charlatan on record.

Paracelsus was born in 1493, and died miserably of profligate exhaustion in 1541, though he boasted of having discovered the secret of the *elixir vitæ!* To this arch-impostor the world is indebted for having brought such deadly poisons as Mercury, Antimony, and Opium into active use in Medical practice. He was an accomplished proficient in all the arts of quackery and knavery, and the Drug School of Physic has reason to venerate its founder and head. He was truly the prince of "heroic" practitioners, and Dr. Hamilton styles his practice "bold and enterprising!" He found many followers; and, towards the close of the sixteenth century, the Chemical, or "poison," School had extended over Europe, gradually superseding the comparatively innocuous simples of the ancients. Pharmaceutical Chemistry grew up as a separate art, devoted to the discovery of new poisons, and, as a necessary consequence, diseases increased, and became more malignant.

It is thus apparent that the use of mineral poisons, as medicines, is of comparatively recent date, and derives no authority whatever from the teaching or practice of the ancients. Even now, scarcely a year passes without some new poisonous preparation being discovered, and introduced to the profession, under the auspices of some practitioner, who finds it his interest to inflate the bubble and puff it into notoriety. Then it flourishes for a time as a "glorious specific" in the treatment of some particular disease, and runs its course of murderous experimentalism on human life, but it is soon found that patients die under the disease in spite of the "glorious specific"—perhaps the more rapidly in consequence of it, the bubble then bursts, and the folly is forgotten. In this way Nature is perpetually reasserting her supremacy over the artifices of Physic-craft, by demonstrating the incurability of any disease by such irrational means.

The respective positions of Hydropathy and Physic-doctoring having been thus indicated, we will now proceed to sketch the progress of Hydropathy as it relates simply to the employment of cold water. In this respect it is popularly associated with the name of Vincenz Priessnitz, of Gräfenberg, in Austrian Silesia, who had his attention fortuitously directed to the healing powers of water, which being entirely new to him, he is entitled to all the merits of a discovery. He opened an establishment for patients at Gräfenberg, in 1828, and soon the fame of the salutary effects of his treatment, and of the persecution to which he was exposed by the machinations of the Drug Doctors, spread over Europe, and he became popularly regarded as the founder of a new and most beneficial system for the cure or the alleviation of many bodily infirmities.

But Priessnitz only revived what had been known and practised thousands of years before him. Herodotus says of the ancient Egyptian Priests, that " they wore linen only . . . they wash themselves in cold water twice every day, and twice every night, and, in a word, they use a number of ceremonies." —*Euterpe*, ii., 37. Hippocrates, who is justly celebrated, in the words of Dr. Hamilton, as "that mighty father of medicine, whose name has obtained the veneration of more than twenty centuries, and whose authority commands respect even at the present day"—this great man, who was the first that laboured to place Medicine on a natural and rational basis, and who has, observes Dr. Francis Adams, "in this way left monuments of his genius more durable than the marble statues of Phidias, his contemporary, and as enduring as the tragedies of Sophocles, or the Olympic Odes of Pindar"—the genius of this illustrious sage led him, as his works testify, to acknowledge the supremacy of Nature, and to appreciate the true character of Hydropathic Agents in the treatment of disease. Nature with him was omnipotent, for his maxim was, "*when Nature opposes, everything else is vain,*" which is the guiding principle of Hydropathic Medicine. Hippocrates discarded all hypothesis in the study of Medicine, and also desired to have its practice denuded of all mystery and superstition, and made popularly familiar.

> "Most especially," he said, "it appears to me, that whoever treats of this art should treat of things which are familiar to the common people. For of nothing else will such a one have to inquire or treat, but *of the diseases under which the common people have laboured*, which diseases, and the causes of their origin and departure, their increase and decline, illiterate persons cannot easily find out themselves, but still *it is easy for them to understand these things* when discovered and *expounded by others*. For it is nothing more than that every one is put in mind of what had occurred to himself. But whoever does not reach the capacity of the illiterate vulgar, and *fails to make them listen to him, misses his mark*. Wherefore, then, there is no necessity for any hypothesis."—*Ancient Medicine*, 3.

It must be remembered, that in the age of Hippocrates the general belief attributed the origin of all diseases, under which individuals laboured, to direct supernatural agencies. He, on the contrary, taught, that "no one disease is either more divine or more human than another, but that all are alike divine, for that each has its own nature, and that *no one arises without its own natural cause*."* And, in treating of "The Sacred Disease," or Epilepsy, he says :—

> "They who first referred this disease to the gods, appear to me to have been just such persons as the conjurors, purificators, mountebanks, and charlatans now are, who give themselves out for being excessively religious, and as knowing more than other people. Such persons, then, using the divinity as a pretext and screen of their own inability to afford any assistance, have given out that the disease is sacred, adding suitable reasons for this opinion, they have instituted a mode of treatment which is safe for themselves—namely, by applying purifications and incantations, and *enforcing abstinence from baths* and many articles of food which are unwholesome to men in diseases."

To uproot such odious superstition, and discredit such infamous practices, that rendered the rational treatment of disease impossible, Hippocrates desired to have medicine placed in a truthful light before all people. But empiricism, on the other hand, has always found its advantage in mystery; and hence the studious aim of Physic-craft in all ages has been to keep the public in ignorance, the more easily to trade profitably on their credulities.

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* Hippocrates' Works, Syd. Ed., Treatise *On Airs, Waters, and Places*, 22; also, *On the Sacred Disease*.

All through the works of this great Hydropathic teacher, the necessity of attending to Diet and Regimen is imperatively enjoined. To find out "what to eat, what to drink, and what to avoid," so as to adapt diet to individual constitutions, he regards as the legitimate aim of Medicine, because from unsuitable diet "pains, disease, and death arise," while from such as accords with individual constitutions, "food, growth, and health arise." "Hence," he says, "to the discovery and investigation of *such things*, what more suitable name could one find than that of Medicine?—since it was discovered for the health of man, for his nourishment and safety, as a substitute for that kind of diet by which pains, diseases, and deaths were occasioned."

Thus, with an unerring accuracy to which the discoveries and investigations of twenty-two hundred years have added only confirmation, Hippocrates traced the origin of all disease to *mal-nutrition*, and consequently most correctly considered medicine as but a corollary to dietetics, which is sound Hydropathic doctrine, as now demonstrated by the revelations of Physiology. As was to have been expected, therefore, such Hydropathic Agents as Air, Water, Temperature, Diet, and Regimen obtain primary consideration in his works. Cold and hot bathing he esteemed of great efficacy in various diseases; but an objection that is even now frequently urged against making them fully available in general practice, appears to have been felt by Hippocrates, namely, the difficulty of having Hydropathic arrangements and regulations properly carried out by patients in domestic life. Undoubtedly, this is a serious drawback, and must continue to be so felt until the intelligence of the public is fully awakened to their own sanative interests. Of the Bath, he says:—

> "The Bath is useful in many diseases, in some of them when used steadily, and in others when not so. Sometimes it must be *less used* than it would be otherwise, *from the want of accommodation; for in few families*

*are all the conveniences prepared, and persons who can manage them as they ought to be.* And if the patient be not bathed properly, he may be thereby hurt in no inconsiderable degree, for there is required a place to cover him that is free from smoke, abundance of water, materials for frequent baths, &c."—*Treatise on Regimen in Acute Diseases*, 18.

Thus, in his *principles* of Medicine, Hippocrates was essentially Hydropathic, and true to Nature, though in practice he was not able to shake off all the errors he had inherited from the Priest-Physicians under whom he was educated. To have done so, indeed, would have argued a superhuman genius and a miraculous enlightenment, considering the age in which he lived, and the impenetrable darkness that rendered inscrutable the organism, functions, and laws of vitality. That he achieved the unequalled success he did proves the superiority and comprehensiveness of his natural genius—the acuteness of his powers of observation and judgment, and the marvellous sagacity that led him to study Nature by the light of her own phenomena, as she never had been observed and studied before in relation to disease.

To estimate fairly the profound and penetrating genius of "the mighty Father of Medicine," it must be considered that the concentrated labours of all the great minds that have existed since his age have only confirmed the great Hygienic and Therapeutic truths which he was the first to proclaim; while, as regards the nature and treatment of disease, we possess little more absolute knowledge to-day than what he revealed to us twenty-two centuries ago! His principles certainly have been studied and carried more perfectly into effect, guided by lights that were denied to him; but even this is only true of Hydropathic Medicine, for the bleeding, blistering, drugging school of Physic is now only more hopelessly entangled in bewildering mazes of ignorance, doubt, and confusion, out of which they never can be extricated until they retrace their steps, and return to the first principles of Nature.

The Greek Physicians who followed Hippocrates departed altogether from his principles, and found it easier to mystify ignorance and impose on credulity by pretentious hypothesis, than to follow his unpretending precepts and abide humbly by the diligent observation of Nature. The Romans derived their knowledge of medicine from the Greeks, and at first employed cold water for healing purposes, and the most eminent among their physicians, as Celsus and Galen, adopted the principles of Hippocrates; but, in professing to illustrate them, marred their simplicity by overloading them with a large admixture of errors and conjectures. According to Sprengel, the first contriver of the Shower Bath was Asclepiades, a foreign physician who flourished at Rome about 96 B.C., among whose favourite remedies in the treatment of disease was the free use of cold water, both internally and externally. No modern fashionable practitioner, however, could be more alive to the policy of humouring the foibles and appetites of patients than he was, for, when he discovered that a predilection for wine existed, he prescribed it largely and unhesitatingly, and, consequently, acquired great reputation and popularity.

Suetonius relates that Cæsar Augustus was recovered from a dangerous illness by his freedman-physician, Antonius Musa,* after his other physicians had pronounced his case desperate, by subjecting him to strictly Hydropathic treatment. This event wrought a great change in the public sentiment respecting the practitioners of medicine. Musa was rewarded profusely. He received a large sum of money, was exempted from all public taxes, was made free of Rome, allowed to wear a gold ring, and his statue was placed next to that of Æsculapius. In further honor of him, the professors of Physic were then, for the first time, admitted to the immunities of Roman citizenship.

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* Antonius Musa was a domestic slave to Cæsar Augustus, and studied medicine while in that capacity, as was common among the Romans. He was subsequently made a freedman, and enjoyed good practice. He appears to have studied the curative properties of cold and hot bathing in relation to particular diseases, and to have been well acquainted with the efficacy of diet and regimen, which he also employed in the case of Augustus. Horace, when in delicate health, consulted Musa, who ordered him to adopt cold bathing, instead of the warm baths he had been in the habit of taking. In his epistle to Numonius Vala, book i., xv., he says, "I am to be bathed in cold water, even in the midst of frost," which he does not appear to have contemplated with much pleasure.

The use of cold bathing in the treatment of disease became popular, and the foreign adventurers, freedmen, and slaves who then practised as physicians at Rome, recklessly applied it to every form and in every stage of disease without ever having studied it properly. Deaths consequently followed, the physicians again fell into disrepute, and the use of cold bathing became unpopular.

Celsus, who was the first citizen of Rome who cultivated medicine and obtained fame as a writer, and who lived in the early part of the first century of the Christian era, appears to have been the first who recommended immersion in cold water as a cure for Hydrophobia; but his mode of employing the remedy exposed the patient to the chance of being drowned in the hope of relieving the disease. He says :—

> "The only remedy is to throw him unexpectedly into a fish-pond, and, if he be unable to swim, keep him for some time immersed so as to make him swallow a portion of the water, and then raise him out of it, alternately immersing and emerging him; but, if able to swim, he should be kept in the same manner at times immersed by force, so as to be surfeited with water: by which means both the thirst and the dread of water will be effectually subdued."—*Medic.*, Lib. v., cap. 27.

This water ordeal was employed in England in the popular treatment of reputed witches, and with as much reason as Celsus recommends it. The Bath is an admirable agent—the best we possess in the treatment of Hydrophobia, but not applied after so senseless and cruel a fashion.

From the decline of the Roman Empire until the revival, or rather new birth, of letters consequent on the discovery of the art of Printing, we find but few traces of cold water having been used by Physicians as a recognised therapeutic agent. There is evidence, indeed, that in parts of Africa, Asia, and Europe, cold water was constantly used, both externally and internally, as remedial in disease, but we are almost completely in the dark respecting details of treatment. The native Egyptians continued the use of cold bathing in disease, the practice of which they doubtless derived from the Priest-Physicians of ancient times, and they also had the hot-air bath. Savary, in his *Letters on Egypt*, observes that the heat of the country gives rise to a burning fever to which the inhabitants are subject, but "they soon *get rid of it by regimen, drinking a great deal of water, and bathing in the river.*"

Bruce, the celebrated traveller, likewise testifies that violent fevers are frequent in various parts of Africa he visited, and that the patients are made to drink copiously of cold water, while they are repeatedly *douched* with it. He describes a malignant endemic fever which prevails in Abyssinia and Nubia, similar to the yellow fever, and the established treatment was purely Hydropathic. "The *nedad*," as the fever is called, "generally terminates the third day in death; but," he adds, "if the patient survives till the fifth day, he often recovers by drinking water only, and throwing a quantity of cold water upon him, even in his bed, where he is permitted to lie, without attempting to make him dry, or change his bed, till another deluge adds to the first." He also says, "perfect abstinence is observed, unless from copious draughts of cold water."—*Travels to Discover the Source of the Nile.*

Helbigius says that a similar practice, in treating almost all diseases, prevails in various parts of the East Indies, particularly in fevers and dysenteries, and that the practice is very useful to the sick. He states "that he was greatly harassed with an effervescence of bile and fever, headache, sleeplessness, looseness, and gripes had exhausted him. He adopted the plan of washing in cold water. After the first washing he was better; some more restored his health."—From *Beaupré on the Effects of Cold.*

Kolben, in his account of the Cape of Good Hope, says "that the Cape Physicians bathe their scorbutic patients in a bath of bright spring water, in which several odoriferous herbs and leaves are infused. The scent of the herbs, &c., is very reviving; and the bath is so strengthening, and has so many other happy effects, that the patient comes out of it all alive, as we say, and rejoices under an imagined renovation of his faculties."

Of Small-pox, Beaupré says, "it appears that cold is useful in proportion as the pock is confluent, and threatens to become malignant;" and of its therapeutic virtues the Chinese and Japanese must have been very early acquainted, for they have treated that foul disease, and also measles, with cold water affusions from time immemorial. The Dutch, by introducing the use of the lancet, mercurial preparations, and other deleterious devices of Pharmacy, terribly corrupted the simplicity of Japanese medical practice.

Sir John Chardin, who travelled extensively in the East during the seventeenth century, relates that in 1674 he experienced the great advantages of the Persian mode of treating fever. On a journey through Persia, accompanied by a French surgeon, he was seized by a violent attack of fever, with delirium followed by stupor. The treatment of the surgeon doing him no good, he resolved to place himself in the hands of a Persian physician, who commenced by ordering him to drink plenty of snow-water and other preparations, while he had buckets of cold water poured over his naked body. The French surgeon, says Sir John, could not contain his indignation at such treatment: "The man is killing you, Sir," said he to me in a compassionate tone. "What! *bathe you with cold water in the heat of a malignant fever*, with a pint of emulsion, two pints of decoction, and a pound of confection in your belly, with, I do not know how many draughts of snow-water. Depend upon it, that instead of being very soon without fever, as he has promised you, your death will be the end of the business." But Sir John persevered, having confidence in his Persian physician, and perfectly recovered. The same treatment is continued in Persia and other Eastern countries at the present day.—*Travels into Persia, &c., by Sir John Chardin, London*, 1686.

The ancient Britons, and indeed all the Northern nations—the Muscovites, Fins, Danes, and Scotch Highlanders, though inhabiting comparatively cold regions, all appear to have used cold water freely, as a means of preserving health and alleviating disease. The ordinary practice was to immerse children as soon as they were born in cold water, in the belief that this practice continued during childhood made them grow up hardy and strong. This practice was continued in England down to the fourteenth century, when cold bathing would seem to have fallen into disrepute, until its general revival all over Europe at the commencement of the eighteenth century.

As early as the sixteenth century, several works were published reviving the teaching of the ancients on the subject of cold bathing, among the first of which was one entitled, *Balneis, quam salubria sint, cum ad sanitatem tuendam, tum ad morbos curandos. Dialogus adversus niotercus*, published at Rome, in 1534, by John Francis Brancaleo, a physician of Naples. The subject at that time must have been exciting some attention, for Brancaleo defends the use of the practice against the objections of his contemporaries, and refers to the authority of Galen as sustaining his views. He declares cold bathing to be one of the best preservatives, as well as restorers of health, and advises its adoption from his experience of its good effects, while he strongly reprobates the constant use of purgatives, which was a prevailing error in the practice of his day.—*Hamilton's History of Medicine*, vol. ii., p. 27.

During the seventeenth century, publications on the subject increased. Two works by Dr. Hermanus Vander Heyden, were published in 1652-3, highly laudatory of the virtues of Hydropathic treatment; and in 1684, an Italian Physician, Moniglia, brought out a work at Florence on its great therapeutic value in febrile affections. At the commencement of the eighteenth century the attention of the reflective portion of the profession on the Continent and in England was thoroughly aroused to the importance of the subject by several Physicians of high repute having published their own experience of the beneficial effects derivable from the use of cold affusion in fevers, gout, and other diseases.

Sir John Floyer, M.D., of Lichfield, and Dr. Edward Baynard, of Bath, were among the ablest writers in England on the subject. In 1706, they published conjointly a work entitled *Psychrologia*, consisting of two parts—the first by Sir John contains a dedication to the Surgeons of London, and a series of letters in which he ably and enthusiastically advocates the Hydropathic treatment in various forms of disease. In his dedication he says:—

"No part of Physic is more ancient than cold bathing, since we find many descriptions of its good effects in our oldest authors—Hippocrates, Celsus, Cælius Aurelianus, and Galen. . . The art was certainly first invented by the common people, who used it for the preservation of their health, and fortifying themselves against cold, as other animals do. The priests farther improved this by applying it to divine immersion, thereby to purify the spirits, and to make them more calm and vigorous in devotion. The Egyptians and Greeks observed how it contributed to the cure of many diseases, which Hippocrates mentions. . . The English nation has not been wanting to the improving of this art; for they have discovered the cure of the rickets by it, and rheumatic pains also; and some use it in winter, as the Romans did. In Staffordshire—at Willowbridge—they have a more bold practice than either the Greeks or Romans used: they go into the water in their shirts; and when they come out they dress themselves in their wet linen, which they wear all day, and much commend that for closing the pores and keeping them cool; and that they do not commonly receive any injury, or catch cold thereby, I am fully convinced from the experiments I have seen made of it."

He declares, "I do, therefore, esteem cold bathing a very ancient as well as a useful practice, which ought, therefore, to be revived; and though it has always been practised in England, yet, for a hundred years past, it has been much disused." He then proceeds to explain the reasons for this disuse, and a good deal of what he says is applicable to the discouragements that beset the revival of Hydropathy generally in our own day:—

"The reasons for the disuse of cold bathing in the last century were these:—*The ignorance of the people in matters of Physic*, who usually take that, as well as their doctors, from the common vogue, which is always altering and changing; and *it was then the interest of the chemical doctors to recommend themselves by new notions, new methods, and new medicines*, and they, therefore, rejected and cried down all the old opinions and practices. They imputed all diseases to crudity and acid salts, and taught that they must be cured by volatile and fixed salts, by chemical resources and strong tinctures of mineral sulphurs, and brandy spirits, which they did assure the

> world did strengthen nature, and purify the blood by perspiration, and they wholly despised all the external regimen prescribed in Galenic authors as unnecessary; and cold baths ought to be esteemed the most considerable part of the cold regimen."

Drugs before Nature, has always been the ruling maxim with Physic-craft, and thus what they ignorantly, or with reckless perversity give to "strengthen nature," must necessarily have a directly contrary effect. But, continues Sir John—

> "It is also very probable that the change of religious opinions had no small influence in the use of cold baths; for anciently the virtues of the holy wells were imputed to some saint, which the last age did not credit, and therefore rejected the use of the cold baths, with the opinion of the virtue of the saint; after which came the disuse of baptismal immersion; also, parents pretended the danger of that practice, as well as the immodesty; and they could not justify these prejudices without crying down cold baths as dangerous."

Sir John then adds another reason, which unquestionably did exercise considerable influence on the habits of the people, with respect to diet, whatever the effect may have been in discouraging cold bathing. He refers to "the increase and interest of foreign trade in the last century, which then introduced all the hot regimen from the hot climates, such as tobacco, tea, coffee, wine, and brandy spirits, and spices, and these are unnatural to English bodies; for a cold regimen is proper to cold countries, as a hot regimen for hot regions, because they preserve our bodies in a state suitable to the ambient air. If we stop the pores by a cold regimen in hot countries, a fever and fluxes immediately succeed; and if we keep them open by a hot regimen in cold countries, defluxions and intermitting fevers, and faintness, happen."

There was one circumstance that contributed, no doubt, to discourage cold bathing on the Continent, and throw discredit on the teaching of the ancients respecting it, to which Sir John did not allude, though its influence must have been felt by Physicians in England. The great pestilence known as *The Black Death*, which desolated Asia, Africa, and Europe in the fourteenth century caused great alarm, and the Faculty of Paris was called on to furnish such regulations with regard to living as they considered should be observed during its prevalence. After prolonged cogitation, a report was drawn up, which, for folly and superstition, would have disgraced the medicine-men of *Numbo Jumbo*. In their wisdom they pronounced *bathing to be injurious*, and prohibited its practice! Dr. Hecker remarks, "this famous faculty found themselves under the painful necessity of being wise at command, and of firing a point blank shot of erudition at an enemy who enveloped himself in a dark mist, of the nature of which they had no conception. In concealing their ignorance by authoritative assertions, they suffered themselves to be misled, and while endeavouring to appear to the world with eclat, only betrayed to the intelligent their lamentable weakness."* But there is every reason to believe that their prohibition of bathing had considerable effect on the gross and credulous intellect of the age. True, the pestilence was a febrile affection, and therefore was peculiarly susceptible of amelioration by Hydropathic Agents; but the Physic-craft of the fourteenth century was as wise on the subject, and as disposed to study it, as the generality of Practitioners in the present day.

Sir John appears to have laboured under the conviction that his efforts to revive a healthful practice would expose him to the enmity of the Chemical Doctors, who were hostile to any simple and natural mode of treating disease. "I know," he says, "I must meet with great prejudices, as well as abusive reflections in this undertaking. . . . The common people will teach one another, and be convinced by their experience; but learned men are too apt to adhere to their own opinions."

Two public baths—one "the ladies'," the other "the men's"—were opened by Sir John at an ancient spring called "Unite Well," about a mile from Lichfield. They were each about sixteen feet long by twelve broad and five deep, with "a convenient room built to each, both for undressing, *and sweating*, upon great occasions." These baths were opened in 1701, and he says he had great difficulties to encounter in "prevailing over the prejudices of the common people, who usually despise all cheap and common remedies, *which have ordinarily the greatest effect.*" He relates the particulars of a great number of cases of serious disease, both acute and chronic, which were cured or relieved by the judicious use of Hydropathic means, *after all drug remedies had been tried and failed.* And this is exactly the experience of to-day.

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* Hecker's Epidemics of the Middle Ages, by Dr. Babington, third edition, p. 50.

The second part of this interesting work, by Dr. Baynard, who was then about seventy years of age, is written in quaint, caustic, and expressive style. It affords considerable insight respecting the character and practices of the Physic-Doctors of the time, whose discreditable proceedings receive no quarter from the doctor, who was obviously an able physician and a most conscientious man. He says:—

> "I always, thank God, looked upon it as most impious, and one of the worst of wickednesses, in serious things, to impose upon the living, but much more to banter, and hand down a falsehood to posterity. . . . For men ought to be very just in what they publish and assert, in that tender and nice concern of life, for all things in reference thereunto ought to be considered well, and treated with the greatest caution; *for there lies no writ of error in the grave*, but the sick man is finally concluded by the knowledge or ignorance of his physician. But where knavery and neglect help to compound the doctor, there, I say, the patient is in a deplorable condition, *more from his director than his disease.*"

The doctor had no faith in mere physic, but a prolonged experience had taught him to appreciate aright the virtues of Hydropathy. Of medicine he says—"I am apt to think that the invention of *compounds* was from not knowing the virtues of *simples*, supposing it like shooting at a bird with small shot; put into a gun pellets enough, and one or other must hit." Among the many cases he relates to illustrate the beneficial effects of Hydropathy, are the following:—

The Duke of Hamilton related to him that his sister, wife of Lord Murray, had several sons "born strong, lusty children, yet pined, dwindled, and fell into convulsions, and died in a little time, and that a Highland woman advised her to wash or bath them in cold water, and she did so; and ever after her children thrived and did well, and are now lusty, strong young men."

"In fevers, I have known a great many in my time, who, by the over-care of their health-wrights, were made delirious, and, in their frenzy, have leaped into a pond, or any other cold water, and not one as ever I heard of ever got any harm, *but were thereby presently cured.*

"A learned and ingenious gentleman, a doctor of laws, now living, told me that, being light-headed in a fever, and most intensely hot and thirsty, got from his nurse and rushed into a horse pond in the yard, and there staid above half an hour; it brought him presently to his senses, and allayed both his heat and thirst; after which, when in bed, he fell into a sound sleep, and when he awaked, in a great sweat, he found he was well, but complained of a great pain in his head for some time after, which he himself thinks proceeded from not wetting his head.

"A Turk, a servant to a gentleman, falling sick of a fever, some one of the tribe of treacle-connors, being called in, whether apothecary or physician I can't tell, but, according to custom, what between blister and bolus, they soon made him mad. A countryman of his that came to visit him, seeing him in that broiling condition, said nothing, but in the night time, by some confederate help, got him down to the Thames side, and soundly ducked him. The fellow came home sensible, and went to bed, and the next day was perfectly well. . . . I'll hold ten to one on the Thames side against treacle, snake root, &c., and all that hot regimen which inflames and exalts the blood, breaks its globules, and destroys the man; and then, forsooth, the doctor sneaks away like a dog that has lost his tail, and cries, it was a pestilential, malignant fever, that nobody could cure, and so shows care of the remainder, bids them open the windows, air the bed-clothes, and perfume the room, for fear of infection, &c. And if he be of the right whining, canting, prick-eared stamp, concludes, as they do at Tyburn, with a mournful ditty, a psalm, or a preservative prayer for the rest of the family, &c., so exit Prig, with his starched, formal chops, ebony cane, and fringed gloves, &c."

Dr. Baynard, in his homely, quaint style, relates a number of cases to illustrate the efficacy of Hydropathic treatment in gout, dropsy, and other diseases, when all the resources of medical art had failed to afford relief. He exposes with great severity the conduct of the Physic Doctors who ignorantly declaim against the practice, and observes:—

"*Though it has done cures next to miracles*, yet haughty pride and stubbornness, with an elated brow and a swollen breast, must roar and belch against it to the end of the chapter, because *it a'nt me*—I'm not the man who first broached and tapped this cask of the best, but stalest liquor of more than two thousand years old!

"Oh! Self, Self! what a selfish thing art thou!
Like the dog in the manger,
Will neither eat himself nor let the cow."

In 1722, the Rev. Dr. Hancocke, of London, published his "*Febrifugum Magnum;* or, Common Water the Cure for Fevers, and probably for the Plague." He recommends its use internally as the best possible sweating medicine in fevers; and to its powers in exciting perspiration he ascribes its great febrifuge virtues. In 1723, Dr. John Smith published his interesting and able work, "*The Curiosities of Common Water;* or, the Advantages thereof in Curing many Distempers." He gives a number of cases, which are entirely in accordance with the experience of the thoughtful writers who preceded him. A translation of H. V. Heyden's works appeared in 1724; and Dr. Short, in the following year, published *A Rational Discourse of the Inward use of Water;* besides which various other publications appeared about the same period.

Not only in England, indeed, but in various parts of Europe, Hydropathy was extensively practised at the commencement of the eighteenth century. In 1721, the Medical Faculty of Paris awarded a prize to M. Noquez for his treatise on the Medicinal Virtues of Water, in which he contended for its universal applicability as a therapeutic. "On peut la (l'eau) regarder comme *un remèdie universal, propre pour toutes les maladies en general, specifique pour chacune en particuliér*, facile à trouver et à preparer. Elle n'a d'autre defaut que celui d'être trop commune, trop connuè, et par consequent, *trop peu prisée.*"

In Spain and Italy the practice of Hydropathy became general, and obtained a greater reputation than in any other part of Europe. Under the title of *Dieta Aquea*, the use of cold water for a time superseded all diet and medicine in the treatment of disease; but pushed to extremes in the hands of ignorant pretenders, the natural effect was to indispose medical practitioners to even study, let alone countenance a remedy which was at best but imperfectly understood, and most incautiously administered. We learn from a paper published in the *Philosophical Transactions* of 1729, by Professor Cyrillus of Naples, that the practice was judiciously carried out by him and others who had tested its merits. He particularly applauds the action of cold water internally in fevers, as well as in other disorders, and also notices the advantages to be gained by the external application of cold to the bodies of the sick in the form of snow or powdered ice. This was but an imperfect approach to the cold affusion, though the practice was good in itself, and in our own day is followed by the best practitioners who, in some forms of disease, find *local* applications of cold to be of the greatest service.

The first trace we meet with in European practice of the application of the cold affusion in fevers is recorded by De Hahn, in his account of a destructive epidemic that raged at Breslau, in Silesia, A.D. 1737. The mortality is represented as frightful, and the cold affusion was not tried until every other plan of cure had failed. De Hahn was himself attacked, and of his own case he supplies minute details. On the fourteenth day from the commencement of the attack he was almost in the last stage of the complaint. Cold sweats had set in, with a failure of speech, yet from this apparently hopeless condition he was, as he relates, completely restored by freely sponging with cold water.—*Hamilton's Hist. of Medicine*, vol. ii., p. 260.

Still, the doctrine that the cause of fevers lay in the sluggishness of the blood, and, therefore, that warm drinks and applications were necessary, prevailed to a large extent over the voice of Nature. Even Cullen, who was illustrious in his day, and had a mind that detected many fallacies and shook off many prejudices, while he rejected the theory of fever then in vogue, hesitated about recommending cold drink, or the admission of cold air, in its burning stages. In truth, the *rationale* of the action of cold in such cases was then but very imperfectly understood—even the most gifted minds were wandering in mazes of speculative doubt—its application also was in a great degree empirical, and not guided sufficiently by scientific rules to ensure anything approaching to uniform, or even general success.

While, therefore, the laws by which Hydropathic treatment ought to be carefully regulated were not understood, its employment was necessarily uncertain, and, to some extent, hazardous, more especially in empirical hands. Besides, such an exceedingly simple remedial agency was not in harmony with the lingering superstitions of the age, while all the prejudices of routine doctrine combined with the selfish interests of the Physic-Doctors, to discountenance the spread of a system so diametrically opposed to their own. A few enlightened men, acting conscientiously, could do little to force a sensible and natural course of treatment on people indisposed to receive it; and, although the subject was kept alive by various publications that from time to time issued from the press, still the practice of Hydropathy retrograded during the remainder of the eighteenth century, and it was not until the commencement of the present century that a manifest revival took place.

Naval Surgeons had frequently observed the sudden and startling recoveries which occurred in the case of seamen, who, in the delirium of fever, had thrown themselves into the sea, similar to the cases related by Dr. Baynard. In a work on the Diseases of Seamen, published early in the eighteenth century, by Dr. Cockburn, Physician to the Fleet, he says:—"It happens very often that our sailors, who in the time that they are delirious, or have calentures, when lying in their hammocks in a calm summer's day, see the sea through the gun ports very plain and smooth, and, imagining it to be a green meadow, get up a-walking, and fall into the sea; but, if they get at last into their hammocks—*i.e.*, if they are taken up alive—*they sweat very plentifully, and shake off their fever.*"—*Medicina Nautica*, vol. iii., p. 27.

Many interesting cases of this kind are recorded, of which the following may be taken as a sample:—"I remember," says Dr. M'Lean, "when in the East Indies, on board the Airly

Castle Indianman, some cases of remittent fever occurred at Diamond Harbour, where the Company's ships anchor. *Several perished in spite of every precaution.* One of the patients, however, in a fit of delirium, jumped out of one of the ports. He was immediately picked up, rubbed dry, and put to bed. *His senses returned instantly;* his pulse became regular; he fell into a profound sleep; and next morning there was a complete remission. *He recovered afterwards very speedily.*"—*Dr. Currie's Reports*, 1804, vol. ii., p. 572.

Dr. William Wright, who was connected with the medical department of the army in the West Indies, having had his attention directed in this way to the action of the cold affusion, was induced to try its effects in small-pox and tetanus, and was most successful. In 1777 he left Jamaica for Liverpool, and caught the contagion of fever from a sailor who came sick on board and died. His illness commenced on the 5th of September, and it was not until the 9th, after the failure of all the ordinary means of treatment to afford himself relief, and every symptom becoming aggravated, that, as he says, "I put in practice on myself what I had often wished to try on others in fevers similar to my own." In his narrative he gives the full particulars of his treatment:—

> "September 9th, having given the necessary directions, about three o'clock in the afternoon, I stripped off all my clothes, and threw a sea-cloak loosely about me till I got upon the deck, when the cloak also was laid aside. Three buckets full of salt water were then thrown at once on me; the shock was great, but *I felt immediate relief. The headache and other pains instantly abated, and a fine glow of diaphoresis succeeded.* Towards evening, however, the febrile symptoms threatened a return, and I had again recourse to the same method as before, with the same good effect. I now took food with an appetite, and for the first time had a sound night's rest."

On the 10th he used the bath twice, and on the 11th he says—"Every symptom vanished, but, to prevent a relapse, I used the cold bath twice."* He also cured, by the same means, a fellow-passenger who was similarly attacked. Dr. Wright presented a narrative of these cases to the Medical Society of London, in 1779, and Dr. Currie, physician to the Liverpool Infirmary, says—"I immediately, on reading this narrative, determined on following his practice," and he soon found a favourable opportunity for doing so. In December, 1787, a contagious fever made its appearance in the infirmary, and spread rapidly. "On this occasion," says Dr. Currie, "I used for the first time the affusion of cold water in the manner described by Dr. Wright," and the success he experienced was so encouraging that he continued the treatment in the hospital and also in his private practice.

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* Dr. Wright's Narrative, *London Medical Journal*' 1786. Currie's Reports, vol. i., ed. 1797.

In 1797, he published his first volume of "*Medical Reports* on the effects of water, cold and warm, as a remedy in fever and febrile diseases," and, in the dedication to Sir Joseph Banks, he remarks that, although a method of treatment so bold and so contrary to common prejudices made but slow progress, still it "had been so long employed at the hospital here, by my friends and colleagues, Dr. Brandreth and Dr. Gerard, as well as by myself, that it was become general in Liverpool, and common in the County of Lancaster."

Carefully continuing his observations and maturing his experience, Dr. Currie published, in 1804, a second volume of *Medical Reports*, which, with the previous one, passed through several editions. The result of his study and extensive practice confirmed, in the strongest manner, his opinions respecting the value of Hydropathic treatment in fever, convulsive disorders, especially tetanus, and other diseases. "Of it alone," he affirms, "can it be said, that while it subdues the *principle of the fever*, it does not *impair*, but *invigorates*, the powers of life; that it may be repeated again and again with safety; that its application admits of precise rules; and that, while it is *the most powerful of the means of cure, it is the best preventive against the spreading of the disease.*"

Dr. Currie undoubtedly did a great deal to diffuse a knowlege of Hydropathy among the profession, and made some progress towards reducing it to a system by prescribing rules for its practice; but he does not appear to have been acquainted with the writings of the ancients on the subject, nor to have correctly studied its action in relation to the laws of the human economy. He laboured under very erroneous notions concerning the influence of temperature on the human system, which, had he not prematurely died, further experience and reflection might probably have corrected. For instance, he says—"The effect of cold water *used as a drink during profuse perspiration*, is precisely analagous to the affusion of it at such times on the surface of the body—a practice known to be of the *utmost danger*, and enumerated by Hoffman among the causes of sudden death." He, therefore, peremptorily prohibited the use of cold water under such circumstances.

But, by so doing, he sanctioned a physiological heresy that strikes at the very fundamentals of Hydropathy, for it is utterly subversive of its most potent therapeutic properties. He followed Hoffman's authority blindly, without testing it by the observation of Nature—without investigating and judging for himself, which has always been a fruitful source of medical error. Hoffman was misled by thoughtlessly confounding two states of the body which, so far from being "analagous," are totally and essentially dissimilar, namely—the state of perspiration induced by *the expenditure of vital force*, such as fatiguing exercise would cause, and the condition of body when perspiration has been excited in a state of repose—when *no* expenditure of vital force has been employed to produce it, such as the perspiration caused by "wet sheet packing," or by the Hot Air Bath. In the former condition of body, the sudden affusion of cold water over it, or the swallowing of a quantity, is exceedingly dangerous, and has often been immediately followed by death; while in the latter condition the action of cold water is directly the reverse—*it increases vitality*. The one consists with death, the other with life; and this is an inflexible law of Nature, while it is one of the main facts which renders Hydropathy such a powerful and unerring therapeutic.

With such an error lying at the root of his whole Hydropathic practice, it is not surprising that Dr. Currie never realised the great truth, that Hydropathy is an all-sufficient and perfect *Therapeutic System in itself*, and, therefore, is only embarrassed and thwarted when forced into an unnatural conjunction with the adventitious appliances of Drug Medication. This vital truth never illumined his mind, and consequently he never escaped from the delusions harboured by the Physic School, but sought to reconcile Hydropathic practice with them. Hence the highest conception he seems to have formed of the utility of Hydropathy was, that it might be made a useful adjuvant to Physic practice, and he did not aspire to give it a more comprehensive development, consequently, although his polished mind, amiable disposition, and high literary reputation gave a certain degree of popularity to Hydropathy, he completely failed in establishing its practice on a solid and lasting foundation.

Dr. Francis Adams says:—"I have often thought it was to be regretted that the profession in giving a trial to the affusion of cold and hot water in fever, put itself under the leadership of Currie instead of Jackson."* Unquestionably, Dr. Jackson was a more profound observer, and had a far greater practical aptitude, with more varied experience than Currie. In 1798, he published *An Outline of the History and Cure of Fever, Endemic and Contagious*, and in 1808, *An Exposition of the Practice of Cold Affusion in Fever*, which he had practised with remarkable success, but how discreditable to the Medical Profession—more especially to its Schools and Heads—that "leadership" in such a matter should be left to spring up from the ranks? Was it not the imperative duty of every one to study, test, and judge, and primarily so, a duty obligatory on those who made a profession of teaching the Healing Art?

As a body, however, the Medical Profession did not deviate from the course which has been the opprobrium of its history—they were quite content to plod on, blindly following the deceptive theories of Physic systems, manifesting no disposition to study and test fairly what enlightened minds had verified as simple, rational, and of unequalled therapeutic power, as far as their light extended. Hence, although several able works appeared, other than those already referred to, professional apathy was not to be disturbed, while the public had not sufficient intelligence to be made sensible of their own interests.

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* Works of Hippocrates, Syd. ed., vol. i., p. 304, *note*.

It must be admitted, indeed, that while Dr. Currie, in particular, was, personally, most respectfully treated by the Medical fraternity, as "a man whose abilities were an honour to his country—whose death was a loss to the world,"* yet the greatest distrust was manifested respecting the mode of treatment he recommended, and which, with all its imperfections of practice, had been marvellously successful. He did not hesitate to censure the stolid obstructiveness of the profession. He complained of their "frigid indifference," which, he says, "in private practitioners may be explained, and can scarcely excite surprise, but the same neglect in those entrusted with the lives of our brave defenders" (in the military hospitals) "must excite a stronger emotion."

Dr. Dewar, Surgeon in the 2d Regiment of Foot, who had most successfully applied the Hydropathic treatment when at Minorca, expected that the spirit of enterprise which he thought existed in the medical world would have at once led to its adoption throughout Great Britain. He says:—

> "I expected, on my return to this country, in 1802, that the cold affusion must be universally employed, and was rathered mortified to find, that though no facts were brought forward to its discredit, many medical men seemed very unwilling to employ it. *It is rather singular* that, while new articles, *formerly reputed poisonous*, are daily introduced into the Materia Medica, and *experiments are made with them*, not only without scruple, but with zeal, the affusion of cold water, in fever, a practice frequent among the ancients, and employed with advantage, by some rude nations of modern times, should be considered as too extraordinary in its nature to receive a trial."—*Letter in Medical and Physical Journal*, No. 59.

There never has, indeed, been any hesitation in recklessly engaging in murderous experimentalism with poisonous Drugs, a most notable instance of which was brought to light by the report of Government Commissioners to inquire into the Cholera epidemic among the military at Malta, in 1865. It appeared by their report that six unfortunate soldiers, labouring under Cholera, were selected to be experimented on, by swallowing graduated doses of strychnia—one of the most deadly poisons in the whole Materia Medica, and in the most minute doses, too. Five perished, and one, miraculously to relate, survived both the disease and the treatment!

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* *Edinburgh Med. and Surg. Journal*, January, 1805.

The same murderous system of Drug-experimentalism is extensively, but quietly, pursued in our public hospitals, and by the very men, too, whose prejudices and pride of opinion will not permit them to make an honest trial of a natural agent, the efficacy of which was tested by Hippocrates twenty-two centuries ago! When we thus look into the inveterate obstructiveness of medical men to salutary improvements, we can feel no surprise that the revival of Hydropathic treatment at the commencement of this century was only partial, and soon fell into disuse, so that a generation had to die out, and a more advanced civilization work its changes before the public mind was, in any degree, fitted to receive, with toleration, the reports of the astonishing Hydropathic successes achieved by Priessnitz.

This most remarkable man was the son of a substantial Silesian farmer, and, though of limited education, he possessed an original mind, and to great powers of observation united indomitable energy and sterling independence of spirit. It matters little how Priessnitz had his attention first directed to the curative powers of water—whether he obtained the knowledge, as some have alleged, from an itinerant quack, or fortuitously made the discovery himself, for we may reject the supposition that he acquired it by reading—the fact still is the same, that he commenced to apply the knowledge in his own case when he was twelve or thirteen years of age. Having sprained his wrist, he effected a cure by pumping cold water on it, and keeping a wet bandage constantly applied, until an eruption, or "crisis," appeared, when the cure was completed.

He gradually extended his practice among his neighbours, and, by attentive observation to each case presented to him, his knowledge of disease increased, and his confidence also. Of course, as ignorance and superstition are always prone to reject the natural, and rush, with a blind infatuation, after the supernatural, the cures he effected by simple means, known for thousands of years, were credulously ascribed to witchcraft, or some equally rational cause. Naturally of a taciturn disposition, observant and shrewd, he continued to glean knowledge from his practice, and fashion it into a system. He met with a dangerous accident, when sixteen years of age, by a horse and waggon running over him: three ribs were broken, and he was severely bruised. Rejecting the usual medical aid, he got, by the exertion of breathing and other means, his ribs properly adjusted and bandaged; and, by keeping the bandage constantly wet, drinking water freely, he completely recovered.

Step by step in the best of all schools—that of Nature—Priessnitz slowly, but surely, developed the great curative powers of water, diet, and regimen. He had an immense advantage in not having received a medical education, for he had no preconceived opinions to cast aside—no speculative theories to control or warp the authority of facts—his mind was unbiased, as that of a true disciple of Nature ought to be, and he had the boldness to follow implicitly her unerring teaching. His fame increased, his practice extended, and the sphere of his observations became daily more enlarged. Diseases, abandoned as intractably chronic and incurable by the faculty, yielded to his treatment, until the belief became general that mere water alone could not work such miracles. "His antagonists," says Claridge, "took advantage of this disposition of the people; and their opinion, that Priessnitz was possessed by an evil spirit, was encouraged by the priests, who denounced him publicly in the church. Some idea of the excitement got up against him may be formed, from the fact that the peasantry were in the habit of throwing stones at the early visitors to his house!"

The integrity of his character, the simplicity of his habits, the honest zeal with which he devoted himself to the great work he had undertaken, and the incontestible success that attended his practice, combined to obtain for him the confidence and regard of those who flocked to him as patients. He opened a regular establishment for the reception of patients in 1828, but, as his reputation spread, so did the maliguancy of his enemies increase. He was repeatedly accused of surreptitiously administering drugs which, in an unlicensed practitioner, was a legal offence. His enemies, however, always failed in proving that any drug whatever was employed, and on one occasion the local judge decided there was undoubted proof before him that diseases had been cured, but no proof at all that Priessnitz had practised medicine—a judgment susceptible of the construction put upon it, that, in the opinion of the judge, as, indeed, of all rational minds, there is no direct or implied relationship between the two things. The fact, indeed, that patients were cured was *primâ facie* evidence against the supposition of drugs having been administered.

After enduring years of local persecution, the hour of final victory and triumph arrived. Goaded to madness by the fame of Gräfenberg cures extending over Europe, the Medical Faculty of Vienna, in the hope of crushing Priessnitz, adopted a course that rendered him more conspicuously illustrious. They denounced the "new system," and appealed to the Emperor to have it prosecuted, "as dangerous to religion and to the monarchy!"—and, when we consider what the Austria of forty years ago was, our only astonishment is that they did not succeed. However, a commission was appointed to visit Gräfenberg, and report on the system pursued there. Fortunately, it was composed of military Surgeons, not of Physic-doctors, else, in all human probability, the result would have been different. After a full investigation, the Commissioners reported in favor of the system of treatment, for they judged from facts, and not by the prejudices of physic dogmas. Priessnitz received Imperial authority to continue his establishment; he gained a signal victory, and the triumph of Hydropathy was complete.

reasonable and exaggerated Polypharmacy. But, as the tendency of science is to *simplify*, and the *law of progression* exists to overcome obstructive prejudices, we may rest contentedly assured that these friendly agencies require *but time* to fulfil their ends." It is, in truth, by those who make a mercenary trade of an honourable profession, that the simple and natural Hydropathic treatment of disease has been most bigotedly opposed; and the reason is obvious: because the moment public intelligence becomes sufficiently instructed and enlightened to appreciate aright the incomparable sanitary and sanative merits of Hydropathy, that moment the Drug Idol is doomed to be cast down, and the reign of its superstitious worship, with the innumerable calamities that flow from it, must necessarily and speedily terminate.

## MEDICAL CONFIRMATION OF HYDROPATHY.

In addition to the opinions of enlightened medical authorities noticed in the preceding sketch, who, from the conviction of study and experience, have testified their belief in the great Therapeutic truths of Hydropathy, the following confirmatory opinions from sources of undoubted character and eminence, are subjoined for the satisfaction of the reader:—

"We do not find ourselves called upon to vindicate the practice (cold affusion), because, like most valuable propositions, it has never been attacked. Through timidity, and a prejudice more owing to words than anything else, it may have been neglected; but *it has never yet been attempted to be controverted*. It has, besides, this peculiar and immense advantage over every other remedy, that in every part of the globe an inexhaustible supply is always at hand, affording a strong presumption in favour of the opinion that Nature has furnished an antidote in every country for the diseases which prevail there. Boerhaave was unwilling to consent, and Voltaire thought it ridiculous to seek a remedy in South America for the intermittent fever which prevails in the North of Europe. For the cure of our most common febrile diseases, it is no longer necessary to ransack the laboratory of the chemist, or to traverse the mountains of Peru. . . . . To arrest the progress of fever, to circumscribe the range of death, to exterminate disease, and to nip contagion in the bud, though present to our dreams of feeling, would seem to be denied to our waking hopes. As far, however, as these objects of attainment can be had, we may expect them from the remedy Dr. Currie has recommended to our notice."—*Edinburgh Medical and Surgical Journal*, January, 1805.

"We are possessed of no physical agent, as far as my experience has taught me, by which the functions of the animal economy are controlled with so much *certainty, safety, and promptitude*, as by the application of cold water to the skin, under the augmented heat of scarlatina, and of some other fevers. This expedient combines in itself all the medicinal properties which are indicated in this state of disease, and which we should scarcely *à priori* expect it to possess; for it is not only *the most effectual febrifuge*, but it is in fact *the only sudorific* and anodyne which will not disappoint the expectations of the practitioner under these circumstances." —*Dr. Thomas Bateman on Cutaneous Diseases.*

"If we consider how the sudden application of cold water acts on the body, we shall see that we may hope this method might be tried with success. For the first effect is shivering and a concussion of the whole body—to these succeed warmth, redness, and a stronger, as well as a quicker pulse. If the patient be put into a warm bed, much perspiration usually follows. Thus fever can be artificially excited. Nor are there wanting *numerous examples of paralysis*, when many remedies had failed, having been cured by means of cold baths, and particularly when the part affected has been placed under a stream of cold water falling from a height."—*Van Swieten's Commentaries on the Aphorisms of Boerhaave.*

"In acute fevers, the object of the cold bath is to lessen the permanent heat of the body—to bring on universal perspiration—to diminish action over the whole circulating system, and to occasion a state of repose of body and mind, and sound sleep. In chronic disorders, on the other hand, the intention of this remedy is finally to increase the animal temperature through the medium of powerful reaction—to strengthen the moving powers—excite the nervous energy, and render the whole system more active and alert; and to this, too, the circumstance of exercise, taken as fully as the strength will bear, will highly contribute. In both cases, however, a reaction on the surface by means of excitement in the circulating system, is the means through which the desired effect is sought for; only, in the former case this is fulfilled, merely by establishing the perspiratory excretion in the fullest manner; in the latter, the operation appears more universal and more apparent."—*Dr. W. Saunders' Treatise on some of the most celebrated Mineral Waters.*

"The practice of employing ice and ice-cold water to burns has succeeded perfectly with me in several cases that have come under my care. One was that of a young lady, who was terribly burnt over the whole of the breast by her handkerchief taking fire. In this instance I principally employed ice, which was kept on the inflamed parts, and by this method the suppuratory process was prevented, as well as the great trouble which generally attends the cicatrizing of a wound from this cause, and the disfiguring scar which is always left for life, when the cure has been conducted in the common way."—*Ibid.*

"A young medical man was attacked with symptoms of inflammation of the brain, while pursuing, with great ardour, his professional studies; and, being a medical man, he was, of all others, the most difficult to treat. [Observe why!] Notwithstanding the intense pain in his head, he *resisted remedies.* Venesection he would not submit to; leeches he had an objection to; calomel, he thought, produced inflammation and ulceration of the mucous membrane of the intestinal canal. It was proposed to pour cold water from a pitcher over his head; the consequence was *diminution of pain, quiet sleep,* and, in fact, so *beneficial an effect,* that the patient himself repeatedly called for *a repetition of the remedy.* I saw this patient several times; and the impression on my mind was, that to this remedy, *and to this alone,* he owed his life in that attack."—*Dr. Seymour's Observations on the Medical Treatment of Insanity.*

This is a most suggestive case, and supplies an admirable illustration of the two systems. The doctor was apparently totally unconscious of the satire he was guilty of on physic "remedies," when he complains of the patient for resisting them, and yet confesses that the pitchers of water alone saved the patient's life. What would venesection, leeches, and calomel have done?

"In a great number of maniacal paroxysms an intense heat is developed. The patients feel a burning heat sometimes in the head, sometimes in the abdomen, sometimes on the skin, which is parched and dry. There are some of them who declare they feel a flame of fire circulating through their veins; hence, many consider it torture to be confined in a narrow and hot room, and to be kept in a bed covered with blankets. Can we be surprised that they prefer lying on the floor, and even upon the stones? Some we see tormented by a devouring fire, unable to bear the lightest garment; and though in a state of nudity, still looking out for something to cool them. Some we see grasping snow by handfulls, and, with delight, making it melt on their bodies, or breaking the ice on the ponds and rivers to plunge into them. It is not uncommon in the hospitals to see men, and even women, lie down naked in cold water, or place the body, and particularly the head, under a stream from a fountain of water. Some entreat to have a douche of cold water poured upon the head. One night, a maniac became furious, and raved out in the most horrid manner. At two o'clock in the morning, I ordered the douche to be administered; and while the cold water fell on his head and inundated his body, he seemed to be gratified and delighted, thanked us for the relief we gave him, became tranquil, and passed the rest of the night in a profound sleep."—*Esquirol, des etablissemens des aliénes en France,* Dr. Beddoes, an eminent physician, notices the struggle that often takes place in the mind of the conscientious practitioner between adhering to routine practice at the hazard of the patient's life, or to rational practice at the hazard of his own reputation. This is by no means of unfrequent occurrence, but the patient is generally the sufferer. A correspondent related a case to him where "a patient had received almost *entire ease from cold water;* and the inflammation seemed to be held in check, when, from the anxiety of friends, another (a fashionable practitioner) was called in. His disapprobation of our practice was immediately manifested by the preference he expressed for the *old plan* of treatment by emollient applications and poultices, mingled with *affected admiration* of the courage which had pushed to such extent *the trial of a new remedy.*" In commenting on this case, Dr. Beddoes observes:—"From part of the following sentence may one not suppose that the eye of a keen observer had been caught by those members of the medical fraternity, who, *without reflection or remorse*, go on *eternally repeating the same vain processes of their art;* and never let slip an occasion of *blasting, by insinuation,* the character of a rival, who, to assuage pain, or preserve life, *shall dare depart from precedent?* Est-il une fin plus tiste (says Rousseau, lettre à M. de Voltaire, Aout 1756) *que celle d'un mourant* . . . . *que les medicins assassinent dans son lit à leur aise*, et que les prêtres barbares font avec art savourer la mort."—*Dr. Beddoes' Contributions to Physical and Medical Knowledge.*

"When cold air and cooling drinks have failed to diminish the violence of the inflammatory symptoms, the disease (small-pox) is liable to assume a bad character. If the eruption be very abundant and difficult; if the pustules be small and pale; if the pulse be frequent and concentrated, or, if there are threatening convulsive symptoms, *then the most successful plan is that of stretching the patient naked on the floor, and pouring over his whole body cold water from a watering-pot*, after which he is to be wrapped up in a woollen cloth and put to bed."—*Odier, Man. de Med. Prat.*

"In the evening I went to bed with a violent fever. I had somewhere read that cold water, drunk plentifully, was a remedy in such cases. I followed the prescription; was in a profuse sweat for the greater part of the night; and the fever left me."—*Benjamin Franklin.*

"Those spots (petechiæ) are formidable symptoms in typhus, whether contagious or non-contagious. Cold washing of the body has been successfully employed. . . Dr. Dewar cured a young man attacked by spotted or petechial fever, with violent epistaxis, by having him placed in a cold water bath. Allion covered with ice, from head to foot, a man who, in malignant fever, had purple eruption with very bad symptoms. *Respiration became free, the pulse rose, delirium, anguish, and cold sweating ceased.* A critical sweat determined the disease."—*Dr. Beaupré on the Effects of Cold.*—Transl. by Dr. Clendinning.

"What disease has not been cured or alleviated by the Bath—the first and favourite prescription of the ancient physicians? Need I say that the efficacy of this remedy, whether hot or cold, medicated or mineral, entirely relates to the improvement which, directly or indirectly, it is capable of affording to the temperature of the patient. I have seen a chilly hypochondriac dash into the cold plunge-bath, and, in a minute or two after leaving it, become all in a glow. Numerous cases of *chronic rheumatism* have, in my experience, yielded to the cold bath, after every other remedy has been tried in vain. The same means have materially assisted me in the treatment of particular cases of *dropsy* and *heart-disease.* Successively alternated with the hot-air bath, cold bathing *may be made generally useful in almost every kind of disease.* . . I have, with the aid of this powerful means (cold affusion), cut short many a fever, which, under the bleeding and starving system, would have filled the pocket of the medical attendant. I regret to be obliged to make such an allusion; but, certainly, the interests of the profession generally have not hitherto led them to question the utility of measures, to which custom, rather than a curative necessity, has reconciled the majority of patients.—*Dr. Dickson on the Unity of Disease.*

"I have neither bled, leeched, nor cupped in any case—and I have not had, during the last year, a single death of man, woman, or child. The depot was never more healthy, and I attribute this principally to my abstaining, during the last three years, from every kind of depletion in the treatment of disease. . . . . . I am doubtful whether a person in private practice could ever so far overcome prejudice as to use the cold bath with the confidence I do in every kind of fever. Its power, together with the warm one, *is truly wonderful* in equalising the temperature of the body. When I compare the success of my treatment during the last few years, with that of my previous experience, *I feel inclined to curse the professor* who first taught me to open a vein with the lancet."—*Letter from Staff-Surgeon Hume, Naas Barracks, Ireland,* Dec. 5, 1839, *to Dr. Dickson.*

"In diseases termed 'inflammatory,' what measure so ready or so efficacious as to dash a pitcher or two of cold water over the patient—*cold affusion*, as it is called? Whilst serving in the Army, I cured hundreds of inflammatory fevers in this manner—fevers that, in the higher ranks of society, under the bleeding and starving systems, would have kept an apothecary and physician—to say nothing of nurses and cuppers—visiting the patients twice or thrice a day for a month—if he happened to live so long. Gentlemen, with the cold dash you may easily,

"'While others meanly take whole months to slay,
Produce a cure in half a summer's day!'

"That being the case, do you wonder that prejudices should still continue to be artfully fostered *against so unprofitable a mode of practice.* Why do not the gullible public *examine for themselves?* Why will they continue to *bribe* their medical men to keep them ill?"—*Dr. Dickson, Fallacies of the Faculty,* Lecture VIII.

"The hot air bath, in some cases, and the wet sheet, which, as used by the hydropathists, is one of *the most powerful of diaphoretics,* will be probably employed more extensively, as therapeutic agents, in proportion as the importance of acting on the skin, as an extensive collection of glandulæ comes to be better understood. The absurdity (?) of the hydropathic treatment consists in its indiscriminate application to a great variety of diseases; no person who has watched its operations can deny that it is *a remedy of the most powerful kind;* and, if its agency be fairly tested, there is strong reason to believe that it will be found to be the most valuable means we possess for various specific diseases, which depend upon the presence of a definite materies morbi in the blood, especially gout and chronic rheumatism, as well as that depressed state of the general system, which results from the wear and tear of the bodily and mental powers."—*Dr. W. B. Carpenter, Manual of Physiology.*

"Once for all, the principle of scientific Hydropathy—that is, the renewal of the body by water and food—the increase of growth secondary to the increase of moulting—is no quackery. It is not an underhand mode of doing nothing, like the profession of Homœopathy, but a *bona fide* use of a powerful agent."—*Dr. T. K. Chambers, The Renewal of Life.*

"If men knew how to use water so as to elicit all the remedial results which it is capable of producing, it would be worth *all* other remedies put together."—*Dr. Macartney's Lectures in Trinity College, Dublin,* 1826.

"We hope that the publication of these statements, regarding the efficacy of cold water, which Dr. Macartney's oral prelections have already diffused pretty extensively, will contribute to the more extended employment of a means of cure, the *extraordinary efficacy* of which, in some of the *most dangerous* circumstances, is only paralleled by its extraordinary simplicity."—*British and Foreign Medical Review,* July, 1839.

In his work on *Medicines, their Uses, &c.,* sixth edition, 1864, Dr. J. Moore Neligan, though a devoted adherent of the Drug School, says of water:—"Independent of its pharmaceutical uses, water, though scarcely to be called a medicine (why? is it too natural for that?), is frequently pressed into the service of both the physician and the sugeon." He says Dr. Macartney first applied it to the treatment of ulcers, but this is an error; it was so applied many hundreds of years before Macartney was born. He also admits that "the value of wet bandaging in many injuries cannot be overrated." And of Baths he says—"Baths have become an all-important element in the treatment of injuries."

> "A stupid, self-willed member of the physic craft told me that he would sooner believe witchcraft and spectrums than that the cold Bath could cure anything in anybody; nay, quoth he, though I should see it, I won't believe it."—*Floyer's and Baynard's Psychrologia*, p. 123.

The same spirit, unfortunately, in dealing with the incontestible facts of Hydropathy, still actuates the great majority of Drug practitioners.

> "The tendency of ordinary medical practice (in the hands of enlightened practitioners) has, of late years, been towards the principles on which Hydropathy is based. A manifest disposition exists, on the part of the more enlightened members of the profession, to rely much less on *art* and much more on *nature* in the treatment of diseases of every type, but especially those of a chronic character, than was formerly the case."—*Chambers's Encyclopædia, Art. Hydropathy.*

Such are the opinions expressed respecting Hydropathic practice, by gentlemen more or less identified with the Drug-school of medication, some of whom wrote before Hydropathy had received the scientific development which has so signally brought its great Therapeutic properties to light. The reader, who is personally unacquainted with the subject, may learn how to estimate the virtues of a system which has extorted such praise and respect from those who had no professional sympathies with it.

# CHAPTER III.

*Origin of Warm Bathing—Thermal Springs used by the Priest-Physicians—Converted into Baths by various nations—Origin of the Hot-Air Bath—Its existence in Greece, &c.—The Early Roman Baths—The Hot-Air Bath adopted from the Greeks—The magnificent Baths of the Roman Emperors—Knowledge of the Bath carried to Britain—Decline and Destruction of the Bath in Rome and Western Europe—Is Preserved in Asia, Africa, &c.—Descriptions of the Baths of the Russians, Fins, Egyptians, Intertropical Africans, Chinese, Japanese, North American Indians, Mexicans, &c., and of the Irish—The universality of the Hot-Air Bath conclusive as to its utility to Mankind.*

THE Warm, the Vapour, and the Hot-Air Baths were well-known to the ancients as curative and alleviative agents in the treatment of disease. In his excellent work on the *Eastern Bath,* Erasmus Wilson says, "The heated rock and the vapourisation of Water would seem to have originated the primitive idea of a hot-air and hot-vapour bath." No doubt, the supposition is well founded; and we may reasonably conclude, as already observed, that hot bathing of every description was first suggested by the thermal springs which are to be found in every quarter of the globe.

At what period or among what people the practice of hot bathing first originated it is now impossible to discover; but we know from Homer that the warm bath must have been established among the Greeks more than three thousand years ago, for he alludes to its use in the Greek camp as an established custom, during the Siege of Troy, or 1194 years B.C.

Diomed and Ulysses are refreshed by the Bath on returning from a night expedition—

"Now, from nocturnal sweat and sanguine stain,
They cleanse their bodies in the neighbouring main;
Then, in the polished bath, refreshed from toil,
Their joints they supple with dissolving oil."—*Pope.*

Nestor desires Heoamede to prepare "the strengthening bath" for Machaon: and the "fair-haired handmaids" of Andromache—

"Heat the brazen urn,
The bath preparing for her lord's return."

It may be reasonably assumed that, perhaps long anterior to this period, warm bathing was a familiar practice throughout the East; for it is alluded to in the Odyssey as an existing institution in the countries visited by Ulysses. The Phœnicians are represented by Homer to have placed their chief delight in repeated changes of apparel, hot baths, and couches. Ulysses gives a glowing description of the bath prepared for him by the nymphs of Circe—

"That in the tripod o'er the kindled pile
The water pours; the bubbling waters boil;
An ample vase receives the smoking wave,
And in the bath prepared my limbs I lave;
Reviving sweets repair the mind's decay,
And take the painful sense of toil away."—*Pope.*

In ignorant and credulous ages, it was to be expected that superstitions should readily centre round thermal springs. Heated by an invisible agency, they were regarded, not as natural phenomena, but as manifestations of some special supernatural power, and this feeling the Priest-physicians were prompt enough in turning to their own advantage. Hence such springs came to be considered sacred, as influenced or presided over by some particular divinity; and as people, when labouring under disease, flocked to them in the hope of obtaining relief, invocations were addressed to that divinity, and it followed that temples should be erected beside or enclosing the springs, for the performance of the rites and ceremonies of worship. As a belief in the curative efficacy of thermal waters increased, greater numbers resorted to them; thus the necessity arose for increasing the bathing capacity of the springs,—for collecting and confining the waters in capacious basins, so as to be always ready for use; and hence the origin of artificial baths, the ruins of many of which that were celebrated in ancient times still exist.

The Greeks were most probably the first who converted their thermal springs into capacious baths. They had several that were early famous for the cures ascribed to them; and as the prevailing feeling—so carefully cultivated by their Priest-physicians—was to attribute all bodily infirmities to the malign influence of some divinity, so for their relief they sought the direct interposition of supernatural power; hence all their thermal springs were dedicated to some fabulous god, principally to Hercules as the god of strength. The Romans, who appropriated from the Greeks in arts, customs, and superstitions, in like manner consecrated their thermal springs to some favorite deity, and their Priest-physicians introduced a ritual to be observed in making use of the waters. Hence, when any benefit was derived, or cures effected, the priests encountered no difficulty in persuading ignorant and superstitious votaries that the alleviations experienced were entirely owing to the beneficent interposition of the particular deity under whose protection the waters had been placed by the solemn rites of consecration.

The Jews also had thermal Baths, renowned for the curative virtues they were believed to possess. Josephus mentions the warm baths at Emmaus, famous "for the recovery of the health of the body," near which the Emperor Tiberius built a city, and called it Tiberias.* Although the site of that city is now only discernible by the extent of its ruins, the Baths still exist about a mile south of the present town, and retain in popular estimation all their ancient virtues.†

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* *Life*, § 16; *Antiquities*, lib. xviii., c. 2., § 3.

† *Volney's Travels, &c.*, vol. ii., p. 230; *Clarke's Travels, &c.*, vol. iv., p. 217.

In his graphic account of the last illness of Herod, it is related by Josephus that "he sent for physicians, and did not refuse to follow what they prescribed for his assistance; and went beyond the River Jordan, and bathed himself in warm baths that were at Callirhoë, which, besides their other general virtues, were also fit to drink, which water runs into the lake called Aspaltitis." And he also relates that "the physicians thought proper to bathe his whole body in warm oil, by letting it down into a large vessel full of oil."—*Antiq.*, b. xvii., c. vii., § 5.

Commander Lynch, of the United States Expedition to explore the Jordan and Dead Sea, says he "stopped for the night in a cove formed by the Zerka Main, the outlet of the hot springs of Callirhoë. The stream, twelve feet wide and ten inches deep, rushes with great velocity into the sea. The temperature of the stream, 95°. It was a little sulphurous to the taste. . . . The current was so strong that, while bathing, I could not, with my feet against a rock, keep from being carried down the stream; and walking where it was but two feet deep, with difficulty retained a foothold with my shoes off."—*Narrative, &c.*, chap. xvi. He also visited the baths at Emmaus. Ibrahim Pasha, he states, when Syria was in possession of the Egyptians, caused the baths to be re-fitted up, but they are again falling into decay.

The Romans when they possessed the country erected spacious baths at these hot springs. Tristram, who visited several of them in 1863–4, says in his *Land of Israel*:—

> "I had been anxious to visit the hot sulphurous springs, of which no less than nine occur in the gorge of the Yarmuck, chiefly on its north side, and similar in character of the water to the hot baths of Tiberias." "One of the springs was in a ruined circular basin; and close behind it were the traces of Roman buildings, doubtless ancient baths, but no vestige of a town. I was told by my guide that lower down there is a much finer fountain, with the vaulted baths still remaining. . . . These are the baths of Amatha mentioned by Eusebius."—P. 458.

Tournefort, in his *Voyage to the Levant in* 1700–3, says:—

> "Two miles from Prusa, and one from the New Baths, in the road from Smyrna to the city of Cechrige, are the ancient Baths of Cap-

> liza, which the Turks call Eski-Capliza. The waters of Old Capliza are very hot. And though this building be much like that of the New Baths, and by consequence not old, it is very probable that these are the Royal Hot Waters used by the ancient Greeks in the flourishing time of that empire, which are mentioned by Constantine and Stephen of Byzantium. Mahomet caused them to be repaired and put into the condition in which they now are."

He also visited the baths of which, he thinks, Strabo speaks in his description of the places which lie between Clazomene and Smyrna, and he there found the remains of a temple of Apollo, adjoining the hot springs. Dr. Chandler, who visited these baths in 1765, says:—

> "You descend by steps to the bath, which is under a modern vaulted roof, with vents in it for the steam, and adjoining to this is a like room, now disused. The current, which is soft and limpid, is conveyed into a small round basin of marble, and runs over into a larger cistern or reservoir beneath it. Our thermometer rose in the vein to 150. Near it is a duct, which supplies a cold stream, but in January, when I saw it, it was dry. A quantity of coagulated blood lay on the pavement. I was informed a sheep had been killed above, and that substance used instead of soap in shaving, which operation is often performed in the baths."—*Chandler's Travels in Asia Minor, &c.*, chap. xxiii.

The same author says of the hot spring of Alexander Troas, that:—

> "It is reckoned very efficacious in the rheumatism, the leprosy, and all cutaneous disorders. They first scour the skin by rolling in the bed of the river, which is a fine sand, and full of holes or cavities, like graves, made for the body. By each enclosure is a shed where they sleep after bathing." —Chap. xi.

And of Hierapolis, he says:—

> "The springs flow so copiously, that the city is full of spontaneous baths, and Apollo, the tutelary deity of the Hierapolitans, with Æsculapius and Hygiea on their medals, bear witness to the medicinal virtues they possess. . . . The pool before the theatre has been a bath, and marble fragments are visible at the bottom of the water, which is perfectly transparent."—Chap. lxviii.

Throughout the East, indeed, there are everywhere to be found the ruins of Thermal Baths, famous in ancient times, and in some instances the ancient sites are still occupied by modern structures erected by the Turks. But the natural course of events was, that as population became concentrated and localised, great inconvenience would be necessarily felt in resorting to such Baths at a distance, and hence the expedient was hit upon of constructing artificial Thermal Baths in towns and cities. Such Baths were common more than a thousand years before the Christian era, and they were generally all heated by a fire-chamber or hypocaust, below the floor of the Bath. In his *Lebanon*, Mr. Urquhart states that he discovered the traces of such a Bath among the ruins of Baalbeek.

But the most ancient Hot-Air Baths of which authentic details, though not very ample, have come down to us, are those of the Greeks, who, according to Thucydides, were the first to adopt from Asiatic nations the custom of appearing naked at their public games. The Lacedæmonians who took the initiative in this respect, made the Bath an adjunct to their *Gymnasia*, and this arose very much from necessity, when the custom prevailed of anointing their bodies with oil, and rubbing them over with sand prior to engaging in its contests. The Bath soon became attached to all the splendid Gymnasiums throughout Greece, the extent of which was vast and grand beyond all modern ideas of magnificence in national institutions. Vitruvius gives a description of the Gymnasium at Athens, which consisted of a great number of buildings united in one vast inclosure, wherein separate accommodation was provided, as lecture-rooms for teachers of philosophy, rhetoric, and other branches of learning, while those skilled in athletic games and dancing had space set apart for their exercises. Those who contended for wrestling prizes had their bodies anointed with oil, and then sprinkled over with dust, so that the Bath was necessary for cleanliness, though it was valued highly as a means of preserving health.—*Vitruvius*, Gwilt's ed., b. v., c. xi.

In all essential respects, the Hot-Air Bath of the Greeks was similar to that now popularly known as the "Turkish Bath." Independently of the cold water Bath, there were other chambers, such as the cold chamber to undress in, the hot-air chamber for sweating, underneath which was the *hypocaust* or fire-chamber for heating, and adjoining was the warm water chamber for washing purposes. In fact, in all the Hot-Air Baths of the ancients, as well as in those discovered as having existed in the most primitive form in various parts of the world, however striking the difference may have been as regards construction, the same principle is observable throughout. There is a remarkable unity of purpose, though not exactly of means.

This mode of heating the Bath is generally believed to have been acquired from Asia, but it is impossible to determine positively. It is the mode, however, that long subsequently the Romans adopted from the Greeks, and which the Turks employed. The Bath, though it became a great national institution in Greece, does not appear to have been generally adopted as a household convenience or luxury. We have already observed that Hippocrates was prevented from ordering it in many diseases in which he considered its use would prove beneficial, owing to the want of proper means for its administration. It is not probable that it ever prevailed in private families to the extent it did among the Romans.

It is strange, that for some 500 years after the foundation of Rome, there was not an artificial Bath of any kind in the city —the Tiber served as the common sewer for the inhabitants, as it does in our own day, and also for cold bathing. Owing to their simplicity of living, the diseases of civilization were scarcely known among the early Romans, and this probably with the fact, that during the same period there were no regular practising physicians resident in the city, may explain why cold bathing alone prevailed. But after the fall of Carthage, her great rival in power, the conquests of Rome, excited by ambition, extended over Greece and Asia, thus opening up sources of unbounded wealth and luxury. The rude, unpolished habits and unsophisticated customs of the unlettered republicans gradually yielded to the seductive influences of riches and pomp. The lust of territorial aggrandisement was pampered by the spoils of rich provinces, and the appetite was whetted for more extended conquests. Thus the refinements and corruptions of a higher civilization imperceptibly changed the aspects of Roman life. As Horace says:—"Captive Greece took captive her fierce conqueror, and introduced the arts into rude Latium;" but with civilizing arts also followed the allurements of vices hitherto unknown, to which, indeed, the plundered effeminacy and sensualism of the East bountifully contributed, until the corruption of social and public virtue, which tarnished the lustre of even the Augustan age, foreshadowed the retribution of the avenging future.

Cato the Elder, 180 years B.C., expressed his fears, that the treasures acquired by the conquest of opulent countries would prove the ruin of his own. "I tremble," he said, "lest the spoils of our enemies ensnare us and ruin the Republic." As luxurious living spread among the Romans, the numerous thermal springs in Southern Italy were resorted to, and gradually rose into repute. They were soon converted into Baths, which were at first very plain constructions, after the manner of the Eastern nations. The springs most celebrated in ancient times were those, still existing, of Baia*, of Naples, and of Ischia—all highly impregnated with mineral substances.

The Romans had statues erected at these Baths, each with a finger pointed to that particular part of the body for the diseases affecting which it was believed the waters of the Bath possessed a special remedial power, while the virtues ascribed to each Bath were also more fully expressed by means of inscriptions on various parts of the building. It is related by an Italian writer quoted in the *Medical Museum*, that the ignorant Physicians, the Goths and Vandals of the Salernum School of Medicine, barbarously destroyed these statues, and defaced the inscriptions!

> "The Physicians of Salernum finding that *all the sick forsook* [illegible] *resorted to the Baths*, they broke the statues in pieces, and [illegible] scriptions; from which time, to the Vice-royalty of Don [illegible]

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* The thermal Baths at Baiæ [illegible] no relief to [illegible] us, and Antonius Musa ordered [illegible] cold [illegible] Velia.—*Ep.*, lib. i., xv., see [illegible]

of Arragon, the Baths were greatly neglected, but that Viceroy caused them to be cleansed, and ordered drains to be made to carry off the superfluous water; he also opened windows into some to admit the light; and caused stone benches to be cut out in others, for the sick to rest on, and, which was the most material, he, by the help of records and traditions, and by the advice of the most eminent physicians, especially Sebastian Bartolin, in a good measure, restored the ancient inscriptions, and caused them to be engraved anew upon marble in each Bath, so that the Baths were much embellished, and put into a very good and serviceable condition."—*Med. Mus.*, vol. ii., p. 460.*

From these thermal Baths the idea, as already observed, was taken of constructing artificial warm water Baths in towns, cities, and private houses for convenience sake. Mæcenas, the friend of Augustus Cæsar and of Horace, is said to have been the first who introduced warm baths at Rome. They soon became highly prized and popular—so much so, indeed, that ambitious men, anxious to win popular favour, had recourse to the expedient of erecting such baths for the public accommodation. They increased with the growing wealth and luxury of the city, until in the reign of Tiberius there were nearly 900 public and private Baths in Rome alone, while no villa was considered properly furnished without being provided with suitable bathing apartments.

At first these baths were constructed for utility only; but in time a lavish luxury prevailed in their erection and embellishment. Rare and precious marbles were employed for the basins, and the resources of artistic fancy were displayed in giving expression to beautiful and costly designs. It was the profuse extravagance displayed in the construction and decoration of these warm water Baths, against which the censure of Seneca, in his 86th epistle, was directed. If the hot-air Bath was introduced so early as the reign of Augustus, there is no reason to believe that it was generally adopted, either in public or private baths, when Seneca wrote. M. Agrippa is reputed to have been the first who erected a splendid public building solely devoted to bathing purposes; and it is more than probable that warm water and not air was at first exclusively used. He is said to have built one hundred and sixty baths; but, obviously, this must refer not to independent separate buildings, but to the number of separate bathing basins in his great building, which were constructed of brick, covered with enamel, to retain the hot water. Seneca says:—

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* This extract is from an interesting paper, translated from the Italian, on the Baths of Italy, but the name of the writer is not stated. As the evil passions of human nature are always the same, who will say that among modern Drug practitioners—to judge by the virulence of their unreasoning invectives against Hydropathy—worthy successors could not be found quite capable of treating every Hydropathic establishment in the Kingdom in the same manner that the Salernum barbarians did the Baths of Naples?

"I write from the very villa of Scipio Africanus, having first invoked his manes on that altar which I take to be the sepulchre of so great a man. I behold a villa built of squared stone; the wall encloses a wood, and has towers after the style of a fortification; the reservoir lies below the buildings and the walks, large enough for the use of an army; the Bath is close and confined, dark, after the old fashion, for our forefathers united heat with obscurity. I was struck with an inward pleasure when I compared those times with our own. In this nook did that dread of Carthage—to whom our city owes her having been but once taken—wash his limbs, wearied with labour; for, according to the ancient custom, he tilled his fields himself. Under this mean roof did he live—him did this rude pavement sustain.

"But who at this time would submit to bathe thus? A person is held to be poor and sordid, whose house does not shine with a profusion of the most precious materials, the marbles of Egypt being inlaid with those of Numidia; unless they are covered with glass; unless Thasian stone, formerly a curiosity worthy of being placed in our temples, surrounds the pools into which we cast our bodies, weakened with immoderate sweating; unless the water is conveyed through silver pipes.

"As yet, I have confined my remarks to *private baths only*. What shall I say when I come to our *public* Baths? What a profusion of statues. What a number of columns do I see supporting nothing, but placed as an ornament, merely on account of their expense. What quantities of water murmuring down steps. We are come to that pitch of luxury that we disdain to tread upon anything but precious stones.

"In this Bath of Scipio are small holes rather than windows, cut through the wall, so as to admit the light without interfering with its resemblance to a fortification. But now we reckon a Bath fit only for moths and vermin, whose windows are not so disposed as to receive the rays of the sun during his whole career; unless from *the bathing-vessel* we have a prospect of the sea and land. In fact, that which excited the admiration of mankind, when first built, is now rejected as old and useless. Thus it is that luxury finds out something new in which to obliterate her own works.

"Formerly, baths were few in number, and not much ornamented; for why should a thing of common life be ornamented, which was invented for use, and not for the purposes of elegance? The water in those days was not poured down in drops like a shower, neither did *it run always as if fresh from a hot spring;* nor was its clearness considered a matter of consequence. But, ye gods! what pleasure there was in entering those obscure and vulgar baths when prepared under the direction of the Cornelii, of Cato, or of Fabius Maximus? For the most renowned of the Ædiles had, by virtue of their office, the inspection of those places where the people assembled, to see that they were kept clean, and of a proper and wholesome degree of temperature; not of a heat like that of a furnace, such as has been lately found out, proper only for the punishment of slaves convicted of the highest misdemeanors. We now seem to make no distinction between being warm and burning.

"How many do I hear ridiculing the simplicity of Scipio, who did not admit the day into his sweating-places or suffer himself to be baked in a hot sunshine. Unhappy man! He knew not how to enjoy life! The water he washed in was not clear and transparent, but, after rain, even thick and muddy, This, however, concerned him but little; he came to the bath to refresh himself after his labour, not to wash away the perfumes of a pomatumed body. What think you some will say to this? I envy not Scipio: he lived in exile indeed, who bathed in this manner.

"Should you not be told further, that he bathed not every day—for those who relate to us the traditions of early times say that our forefathers bathed their whole bodies on market days only—it will be answered—Then they were very uncleanly. How think you they smell? Like men of labour and fatigue. Since dainty baths have been invented, we are become more nasty. Horace, when describing a man infamous for his dissipation, what does he reproach him with? With smelling of perfumed balls—*Pastillos Rufillus olet.*"

This description does not answer to that of a Hot-air Bath, while it does to that of a Warm-water Bath, with a "sweating-room" added. That he had such a Bath in his own villa near Rome is evident from the account of his death, as related by Suetonius and others. Ordered by Nero (A.D. 65) to destroy himself, he opened his veins, but the blood not flowing freely, he swallowed a cup of poison to avoid the pains of a lingering death. The poison, however, not taking effect quickly, he ordered his attendants to place him in a warm bath to excite the hemorrhage. This expedient not proving rapidly effectual, and the soldiers sent to witness his death growing impatient at the delay, he was then carried into the chamber where the furnace was for heating the Bath, and, suffocated by the vapour, was literally steamed to death.

Nero, who reigned A.D. 54–68, is the first Emperor who is mentioned as having erected a public Bath at Rome heated after the fashion of the Greeks. After he became Emperor he went to Athens, impelled by a morbid vanity, to enter the public lists and contend for the prizes of the Gymnasium and at the Olympian games. On this occasion he doubtless became well acquainted with the Greek Bath; and after the great fire which took place in the tenth year of his reign, he commenced the construction of the magnificent Bath on the Palatine Hill, with a view to divert public attention from his own infamous conduct. In connexion with it he established games, in imitation of the Greek Gymnasium, but they never became very popular in Rome. Nero's Bath was small in comparison with some of the gorgeous edifices that followed it; but it was a splendid structure, and beautifully embellished. "Who was ever worse than Nero?" says Martial, "yet what can be better than Nero's thermæ?" Cameron, in his excellent work on the *Baths of the Romans*, says:

> "Whatever was the origin of the Baths in Italy, the use of them was very different from what it had been in Greece; for the *Gymnasia* of the Greeks was frequented on account of exercise, but those of the Romans for the warm bathing. In Italy the Gymnasium constituted part of the Bath; in Greece the Bath was looked upon as part of the Gymnasium. Hence the name Thermæ (from the Greek *Thermos*—heat) given to those buildings by the Romans, a word that was afterwards applied to all the public Baths in the Empire."—*Baths of the Romans, &c.*, p. 37.

The public Baths of the Romans were of unequalled extent and magnificence—the grandest constructions of the kind in design and embellishment that architectural genius ever created. Their vastness and grandeur of conception was only to be paralleled by the elaborate gorgeousness and finished perfection of all their parts and details. They were the Baths of Emperors emulous of securing public favour, and of perpetuating their fame by the construction of architectural wonders worthy of Rome—the mistress of the world! They were all constructed for the one purpose—nearly on the same general plan—differing only in extent and splendour, with trifling modifications of detail. Cameron, after Palladio, gives plans of the principal of these gigantic monuments of genius and imperial munificence; and nothing could surpass the boldness and richness of the bas-reliefs and pictures which adorned the walls and ceilings, or excel the exquisite purity of taste with which their massive decorations harmonised. The rarest marbles, precious vases, unique bronzes, the most elegant columns, and the richest conceptions of sculptural genius, with the gildings and pictorial embellishments of the first artists, all contributed to decorate the interiors of these palatial structures.

The Baths of Titus originally covered nearly the whole of the Equiline Hill, and the solidity of their construction is even now attested by their ruins. "Where the walls are bare," says Burton, "the brickwork has a most singular appearance of freshness; the stucco is also very perfect in many parts, but the marble, of which there are evident traces on the walls and floors, is gone." It would be vain to conjecture what priceless treasures still lie buried in the ruins of these baths—indeed of ancient Rome generally; but they must be inestimable, to judge from what has been recovered. The ancient Baths presented rich mines of the choicest marbles to the barbarian taste and cupidity that plundered them to build and decorate palaces and churches in modern Rome. The entrance into the Baths of Agrippa was by twelve ascending steps; but when the portico was converted into a church, the entrance was effected by twelve descending steps. So with the Baths of Titus. The rooms were more than 30 feet in height, about 137 feet long, and 17½ wide, but now lie buried in rubbish. In 1506 some extensive excavations were made; one room was nearly cleared out, and in it was discovered that wonderful specimen of sculptured genius—the Laocoon. Raffael has been accused of pilfering from the arabesques that adorned the walls and ceilings of these rooms his designs for the ornamentation of the Vatican, and then filling them up again to conceal, as Burton says, "his theft;" but whether this accusation be true or false must now remain a matter of conjecture.

The Baths of Caracalla occupied the Avertine Mount, and excelled, in beauty, grandeur, and extent, those of all preceding Emperors. According to Eusebius, they were completed in the fourth year of his reign, A.D. 215; but he must refer merely to the Thermæ, and not to its accessories. The whole enclosed space was one mile in circumference; and Lampridius says that the works were only commenced by Caracalla, that Heliogabalus, who reigned A.D. 218, added the porticos, which were completed by Alexander Severus, who obtained the Empire A.D. 222. "The outer wall may be traced," says Burton, who inspected its ruins in 1818, "in nearly its whole circumference, though it has lost something of its height." Within the vast space thus enclosed were theatres, temples, extensive festive halls, schools for youth, academies for discussion, libraries free to every one, besides the magnificent Thermæ, in which nearly 2,000 persons could bathe at once.

The principal building of the Thermæ was a grand circular vestibule, with four halls on each side, and extensive basins for cold, tepid, warm, and hot-air Baths. This was on the lower storey, which communicated with a large covered square for exercise when the weather was unfavourable, and also with a a superb hall which, says Olympiodrus, contained 1,600 seats of polished marble for the accommodation of the bathers. The total length of the Thermæ was 1,840 feet, and its breadth 1,476. At each end were two temples: one dedicated to Apollo, the other to Æsculapius, as the tutelary deities of a place sacred to the improvement of the mind and the health of the body.

The number of rooms in the interior, says Burton, and the dimensions of them, "are most astonishing: one in particular, supposed to be the *Cella Solearis*, is 203 feet long by 146 wide; the flat roof which covered it was considered very surprising by the ancients. . . The lower storey, in which the baths were constructed, is entirely buried, and the rooms of the upper storey, which are what we now see, are in complete ruin. The roofs, where any portion of them remain, consist half of pumice stone, for the sake of lightness in such large arches. The niches are very perfect in some squares of it." Spartian says of Caracalla:—

> "At Rome he left some magnificent Thermæ which bear his name. There is a room in them called the *Cella Solearis*, which architects say could not possibly have been constructed in any other way. Cross bars of brass or copper are said to be placed over it, upon which the whole vaulting rests; and the space is so great that skilful mechanics say that the same effect could not be produced by any other means."

Ferguson, in his *Handbook of Architecture*, refers to the St. George's Hall, at Liverpool, as constructed after the design of a small portion only of Caracalla's Thermæ, and what he says may give some idea of the character and extent of the whole original:—

> "St. George's Hall at Liverpool is the most exact copy, in modern times, of a part of these Baths. The Hall itself is a reproduction both in scale and design of the central hall of Caracalla's Baths, but improved in detail and design, having five bays instead of only three. With the two courts at each end, it makes up a suit of apartments very similar to those found in the Roman examples. The whole building, however, is *less than one-fourth* of the size of the central mass of a Roman Bath, and, therefore, gives but little idea of the magnificence of the whole."

Some of the finest works of the ancients in sculpture that have survived were discovered in the ruins of these Baths. In 1540, the Farnese Hercules was found. At first the legs were wanting, but they were also found twenty years afterwards in making further excavations. The Flora, a colossal figure nearly ten high, and the Toro Farnese, a magnificent group, were also dug up in 1540. The latter is one of the most famous groups of antiquity, representing Dirce fastened by her hair to a bull by Zethus and Amphion; but when the bull is on the point of starting off, Antiope orders them to release her, and they are stopping the fury of the animal. According to Pliny the Elder, the artists were Apollonius and Tauriscus. The ground occupied by the ruins of these Baths, Spence, in his *Anecdotes*, says, was obtained possession of by the Jesuits for the boys attending their schools to play in, but they sold all the marble they could find.

The Baths of Diocletian excelled even those of Caracalla in extent and splendour, and were the largest ever built at Rome, or, indeed, in the world, for they were capable of accommodating 18,000 bathers at once! They occupied portions of the Viminal and Quirinal Hills, and extensive fragments of the original buildings yet remain. According to Eusebius, they were completed A.D. 302, and were built principally by the enforced labour of Christians, during the tenth and last persecution. It is related that 10,000 Christian soldiers were condemned to work in their construction during a period of seven years until they were completed, and then those who survived and remained faithful to their religious profession were barbarously put to death. The total number of Christians compelled to labour on the works is set down as high as 150,000, and also as low as 40,000; but no reliance can be placed on such computations. Respecting these Baths, and the habits of the Roman people who mainly used them, Gibbon says:—

> "The baths of Antoninus Caracalla, which were open at stated hours for the indiscriminate service of the senators and the people, contained above 1,600 seats of marble, and more than 3,000 were reckoned in the baths of Diocletian. The walls of the lofty apartments were covered with curious mosaics, that imitated the art of the pencil in the elegance of design and the variety of colours. The Egyptian granite was beautifully incrusted with the precious green marble of Numidia; the perpetual stream of hot water was poured into the capacious basins through so many wide mouths of bright and massy silver; and the meanest Roman could purchase with a small copper coin (an *as*, about half a farthing!) the daily enjoyment of a scene of pomp and luxury which might excite the envy of the Kings of Asia. From these stately palaces issued a swarm of dirty and ragged plebeians, without shoes, and without a mantle, who loitered away whole days in the street or Forum, to hear news, and to hold disputes—who dissipated in extravagant gaming, the miserable pittance of their wives and children, and spent the hours of the night in obscure taverns and brothels,

in the indulgence of gross and vulgar sensuality."—*Decline and Fall of the Roman Empire*, chap. xxxi. See also *Cameron's Baths of the Romans; Lagneau's Traite Complet des Bains; Burton's Antiquities of Rome.*

All the baths of the Emperors had the air heated by flues underneath the floor—the *hypocaustum*—after the Greek model; and the knowledge of this form of Bath the Romans carried with them into every country over which the triumph of their arms extended. So highly valued was the Bath by the military authorities, as a sanitary institution, that wherever a permanent Roman camp was formed, there also Baths were constructed to protect the health of the soldiers. The extensive remains of several such have been discovered in England, at London, Wroxeter, Chester, and elsewhere.

The use, however, of warm water bathing in Italy was not superseded in private families by the introduction of the Grecian Thermæ. On the contrary, it would appear that it became more commonly and constantly practised. The Thermæ was merely *added* to the Balnea—*sweating-rooms* were constructed as an addition to existing warm-water Baths. These sweating-rooms performed their office by means of dry heated air, that is, air comparatively "dry," when contrasted with the suffocating vapour of heated water. Hence Martial, in praise of the Baths of Etruscus, which combined both heated water and heated air, says:—

> "Unless you bathe, Oppianus, in the Baths of Etruscus, you will die unpurified. No waters will receive you so pleasantly; neither the springs of Aponus . . . nor the relaxing Sinuessa; nor the stream of the fervid Passer, nor the proud Auzur, nor the Baths of Apollo at Cuma, nor those of Baiæ, most delightful of all. . . There blaze resplendently the green quarries of Taygetus, vying with rocks of variegated beauty, which the Phrygian and Libyan have hewn deeply; the dewy onyx emits its dry rays, and ophites glow with a tiny flame. *If the Lacedæmonian customs please you, you may, after being gratified with dry heat, plunge into the Virgin or Martian waters*, which shine so brilliantly, and are so pure, that you would scarcely suspect any water to be there."—*Epigrams*, vi., 42. Bohn's Ed.

Martial here seems to refer the origin of the hot-air bath to the Lacedæmonians; but whether it originated in Greece or not, there can be no doubt of the fact, that from the Greeks the

Romans obtained a knowledge of it. Pliny, in describing his villa Laurentinum, at Laurentum, some seventeen miles from Rome, clearly intimates that he had both forms of Bath combined—

> "From thence you enter into the grand and spacious cooling-room belonging to the Baths, from the opposite walls of which two round basons project, large enough to swim in. Contiguous to this is the perfuming-room, then the sweating-room, and beyond that the furnace, which conveys the heat to the baths; adjoining are two other little bathing-rooms, which are fitted up in an elegant, rather than costly, manner; *annexed to this*, is a warm bath of extraordinary workmanship, wherein one may swim, and have a prospect at the same time of the sea."—*Letters*, ii., xvii.

We have also a short description of the Baths at his villa in Tuscany, about one hundred and fifty miles from Rome, where he generally resided during the summer season. Laurentinum was his winter villa—

> "From hence you pass through a spacious and pleasant undressing-room into the cold-bath room, in which is a large gloomy bath; but if you are disposed to swim more at large, or in warmer water, in the middle of the area is a wide bason for that purpose, and near it a reservoir, from whence you may be supplied with cold water to brace yourself again, if you should perceive you are too much relaxed by the warm. Contiguous to the cold bath is one of a middling degree of heat, which enjoys the kindly warmth of the sun, but not so intensely as that of the hot-bath, which projects farther. *This last consists of three several divisions*, each of different degrees of heat; the two former lie open to the full sun; the latter, though not so much exposed to its heat, receives an equal share of its light."—*Letters*, v. 6.

Castel is of opinion that in private life the sweating-rooms were not generally used, though they were attached to all private Baths, but only resorted to on particular occasions—in cases of sickness, perhaps—while the warm bath was a daily comfort and luxury. In his interesting work on the *Villas of the Ancients*, he says:—

> "The custom of bathing in hot water, was become so habitual to the Romans in Pliny's time, that they every day practised it before they lay down to eat; for which reason, in the city the public baths were extremely numerous; in which Vitruvius gives us to understand there were for each sex three rooms for bathing, one for cold water, one of warm, and one still warmer; and there were cells of three degrees of heat for sweating; to the

forementioned members, were added others for anointing and bodily exercises. The last thing they did before they entered into the dining-room was to bathe; what preceded their washing was their exercise in the spheristerium, prior to which it was their custom to anoint themselves. As for their sweating-rooms, though they were doubtless in all their baths, we do not find them to have been used but upon particular occasions."—*Villas of the Ancients*, p. 31.

There is no doubt, however, that the Bath, generally, was most grossly abused by the luxurious and sensual Romans. Its excessive indulgence rather confirmed than created the habits of sensual effeminacy which impaired the manliness of the governing classes, but it cannot be said to have contributed more directly to the decay of the empire. At first prized for its virtues as a means of preserving health, it subsequently was perverted and came to be more valued as a means for ministering to a sensual and enervating voluptuousness. The costly embellishments and furniture of private Baths were extravagant almost beyond belief. The seats were of solid silver, and precious stones lined the floors. The poet Statius says of the Bath of Claudius Etruscus:—

"Nothing there is vulgar. Not the fairest brass
In all the glittering structure claims a place.
From silver pipes the happy waters flow,
In silver cisterns are received below.
See where with noble pride the doubtful stream,
Stands fixed in wonder on the shining brim,
Surveys its richness, and admires its state,
Loath to be ravished from the glorious seat."
—*Kennett's Romæ Antiquæ Notitici*, p. 56.

Juvenal, in censuring the vanity of the rich in endeavouring to outshine one another in the magnificence of their extravagant luxury, says:—

"On sumptuous Baths the rich their wealth bestow,
Or some expensive airy portico,
Where safe from showers they may be borne in state,
And, free from tempests, for fair weather wait."—*C. Dryden.*

That the Hot-Air Bath was first introduced into Britain by the Romans there appears to be no satisfactory reason of doubt-ing, though speculating on its progress from the East, Erasmus Wilson says:—

> "From Phœnicia, from the coast of Tyre and Sidon, a knowledge of the bath may have spread along the southern coast of the Mediterranean, through Egypt, Tripoli, and Algiers, to Morocco and the Pillars of Hercules; or it may, as Mr. Urquhart suggests, have been earliest in use among the nations of Mauritania, and have been carried by the Moors into the countries of the East. From Phœnicia, the knowledge of the Bath may have followed the line of caravan communication into Russia, Persia, China, and Hindostan; while the ships of the then greatest maritime country in the world would have carried it to Greece, to Ireland, and to America."—*Eastern Baths*, p. 12.

This is on the assumption that the Bath originated in the East, of which Mr. Wilson says "there seems little doubt;" but there is no evidence as yet discovered to sustain such a supposition, or indeed to determine positively among what people, or at what remote period, the Hot-Air Bath originated. There is, however, no evidence at all of the Hot-Air Bath having existed in Western Europe until introduced there by the Romans. For nearly 400 years they maintained their supremacy in Britain, and the ruins of their Baths afford unquestionable evidence of the civilization that accompanied them. Bernan, in his *History of Warming*, is of opinion that the Baths erected by the Romans in England were constructed purely for sanitary purposes, without any luxurious embellishments, and although massive and extensive structures, as their remains testify, they were not designed after the magnificent models of the vast and gorgeous Thermæ that ornamented Rome.

With the establishment of Christianity at Rome the decline of the Bath commenced, to which various circumstances contributed. As all the thermal springs were dedicated to heathen deities, they were universally abandoned by the Christians, and the use of the waters held to be sinful. In like manner the magnificent Baths were looked upon as heathen temples, to enter which, it was alleged, would be tantamount to an acknowledgment of the existence and power of the fabulous divinities whose statues adorned their noble halls and porticos. Thus in all ages superstitious ignorance runs riot from one ridiculous extreme to another.

But the removal of the seat of empire from Rome to Constantinople, which followed shortly after the conversion of Constantine, deprived the Baths of the Imperial patronage which was so necessary to sustain them. In the absence of proper control and management, scenes of disorder took place in the Baths, and they became the resort of the idle, the dissolute, and the riotous. Then followed the destruction of the stupendous acqueducts by which a sufficient water supply was brought into Rome, and without which the thermæ could not be maintained. It was in the year A.D. 408 that Alaric the Goth penetrated into Italy, and laid siege to Rome, and successive invasions consummated the barbarous ruin he commenced.

"All these causes contributed," observes Cameron, "to the destruction of the Baths;" and at the same time, indeed, to the ruin of many other noble monuments of ancient genius and art. St. Jerome, writing about this time, with gratification at the destruction and decay that was overwhelming the architectural glories of the city, says:—"The capital has lost its former lustre, the remains of the Pagan superstition of Rome are covered with dust and cobwebs, the people run in flocks from their half-ruined temples to the tombs of our martyrs." In the sixteenth century, the great hall of the Baths of Diocletian, which had survived the havoc of time and barbarism, was converted into a church by Michael Angelo, and consecrated by the name of S. Maria de Angelis, while in the enclosure of the Baths was founded a monastery of the Carthusian order.

Although the hot-air Bath was thus destroyed throughout Western Europe, and the very knowledge of it obliterated for some fourteen hundred years, it survived in other lands. At Constantinople the Greeks preserved it, and the Turks obtained a knowledge of it from the Egyptians, and soon learned to appreciate it as an invaluable sanitary institution. "When first seen by the Turks," observes Mr. Urquhart, "the Bath was a practice of their enemies, religious and political; they were themselves the filthiest of mortals; yet no sooner did they see the Bath than they adopted it, made it a necessary adjunct to every settlement, and princes and sultans endowed such institutions for the honor of their names." In Russia, generally throughout Asia, in America, and in Ireland, Baths, rude and imperfect in many essential respects, but still producing somewhat similar effects, have existed from remote ages. Johnson, in his *Travels Through Part of the Russian Empire*, says:—

> "No class of people seems to pay more attention to personal cleanliness than the Russians, taken *collectively;* yet, perhaps, there are none who live more filthily clad, taken *individually*. In various parts of the city (St. Petersburg) public baths are established, and constantly frequented by all ranks, but particularly by the lowest. Their religion, in some measure, enforces the use of the bath; but as they take little or no bodily exercise, they find the use of the bath act as a powerful remedy in carrying off the superabundant humours, occasioned by the quantity and nature of their food, independently of the enjoyment they find in it. . . .
>
> "Scores of individuals mingle together in an heated apartment, and after being sweated, switched, and half-boiled, rush into the open air like so many frantic satyrs and *plunge into the coldest water*.
>
> "In these heated apartments a range of steps extend from the floor to the roof, which at the top is covered with bricks, and heated from a flue underneath. The heat is in proportion to the ascent of the steps; pipes are fixed in different parts of the room, conveying hot water, which is occasionally thrown over the heated bricks, and rises up in the form of hot steam.
>
> "In this heated room as many individuals enter as choose. Each person is accommodated with a small wooden pailful of hot water, and a bunch of the soft twigs of the birch tree, with which he switches his body, at the same time pouring hot water over his head, which is increased in temperature, in proportion to the excess of perspiration. When the body has arrived at the highest state of heat they suddenly rush into the open air, and scour themselves with soap and cold water. The operation of bathing occupies nearly an hour. The heat at which these baths are taken would be insupportable to a person not in the habit of using it. Here it is used summer and winter; and many of them rush out of the hot bath in winter and *roll in the snow*. They look upon the bath as a sovereign remedy for all diseases and complaints, but particularly in cases of indigestion. Adjoining to the bath appropriated to the men, is a similar one for the women, who, in hordes, perform the same ceremony."

There is one statement which Mr. Johnson makes that involves an error it may be just as well to correct. He says the heat of the Russian Bath would be insupportable to a person not in the habit of using it. Now, it is not the *temperature* of the Bath that would render it insupportable, for the temperature seldom ranges above 130° or 140°—while, as we will see, it is supported at much higher degrees even in such a Bath—but the highly faulty means employed to create and maintain the temperature—viz., throwing water on the heated bricks to rise up in the form of steamy vapour. In a properly constructed and regulated hot-air Bath a temperature twice as great can be supported without the slightest inconvenience, and higher still, should curative purposes render it expedient. Mr. Johnson, writing more than half a century ago, may be excused for committing such a mistake, especially when we find "duly qualified practitioners," in our day, committing far greater, when there are abundant facilities for obtaining correct information on the subject. In a word, a Bath heated by the means Mr. Johnston describes is essentially a faulty Bath, however much it may be better than none at all, and this applies to all the various forms of Bath in different countries we are now about to notice.

Dr. E. D. Clarke, in his *Travels*, at the commencement of this century, in describing the Baths at Moscow, says:—

> "Passing the public streets of the city, a number of men and women are often seen stark naked, lounging about before the public Baths, and talking together without the smallest sense of shame, or of the indecency of the exhibition. . . As soon as the inhabitants of these northern nations have endured the suffocating heat of their vapour baths—which is so great that Englishmen would not conceive it possible to exist an instant in such a temperature—they stand naked, covered with profuse perspiration, cooling themselves in the open air. In summer they plunge into cold water; during winter they roll about in snow, without sustaining any injury, or even catching cold. When the Russians leave a Bath of this kind, they, moreover, drink copious draughts of mead, as cold as it can be procured. These practices, which would kill men of other nations, (!) seemed to delight them, *and to add strength to their constitutions.*
>
> "Being troubled with rheumatic pain, brought on by a sudden change of weather—the thermometer falling, in one day, from 84° of Fahrenheit nearly to the freezing point—the author was persuaded to try a Russian Bath. Nothing could be more filthy or more revolting than one of these

places, for they are commonly filled with vermin. He had been recommended, however, to use the Georgian Bath, situate in the suburbs: this being described as the best in Moscow. It required more courage to enter this den than many of our countrymen would exert for a similar purpose. The building was a small wooden hut; at one end of it was a recess, black and fearful as the entrance to Tartarus. Two naked figures, with long beards, conducted him to this spot, where, pointing to a plank covered by a single sheet, with a pillow, they told him to deposit his clothes, and to repose, if he thought proper; but upon the sheet a number of cockroaches and crickets had usurped the only spot where a person might venture to sit down. As soon as he was undressed, they led him through a gloomy passage into a chamber called the Bath: the ceremonies of which place will now be particularly described.

"Upon the left hand were cisterns of water; and upon the edges of these cisterns appeared a row of polished brass vessels. Towards the right was a stone; and in the middle of the room a step to a platform elevated above the floor. The hot vapour being collected near the roof, the more the bather ascends the greater is the degree of heat to which he is exposed. A choice of temperature is therefore offered to him. On each side of the platform was a stove, in shape exactly resembling the tombs in our churchyards. The upper surface of each stove was covered with a bed of reeds, and over the reeds was placed a sheet. The author was directed to mount upon one of these stoves, and to extend himself upon the sheet; having done this, he found himself nearly elevated to the roof of the Bath, and the heat of the ascending vapour threw him immediately into a most profuse perspiration.

"The sensation resembled what he had formerly experienced in a subterraneous cavern, called the Bath of Nero, upon the coast of Baia, near Naples. He neglected to take a thermometer with him on this occasion; but the ordinary temperature of a Russian Bath is well known: it varies from 104° to 122° of Fahr., and sometimes, upon the upper stages near the roof, it is 20 degrees above fever heat (132° Fahr.) Thus situate, a man began to rub his skin with a woollen cloth, until the exterior surface of it peeled off.

"As soon as he had finished this operation with the woollen cloth, he was desired to descend; and then several vessels of warm water were poured upon his head, whence it fell all over his body. He was next placed upon the floor, and the assistant washed his hair, scratching his head in all parts. Afterwards, he made him again ascend the stove; when once more being stretched at length, a copious lather of soap was prepared, and his body was again rubbed; after this, he was made to descend a second time, and was again soused with vessels of water. He was then desired to extend himself on the stove for the third time, and informed that the greatest degree of heat would now be given. To prepare for this, they cautioned him to lie with his face downwards, and not to raise his head. Birch boughs were now brought, with their leaves on, and dipped in soap and hot water; with these they began to scrub him afresh: at the same time some hot water being cast upon red hot cannon balls and upon the principal stove, such vapour passed all over him, that it came like a stream of fire. If he ventured to raise his head, but for an instant, and draw his breath, it seemed like inhaling flames. It was impossible to endure this for any length of time; therefore, finding himself unable to cry out, he forced his way down from the stove, and was conducted to the lower part of the room; here, being seated upon the floor, and the doors being opened, he soon recovered sufficiently to walk out of the Bath."—*Travels in various Countries*, &c., vol. i., c. 8.

It will be observed that the Russian Bath combined a large, and occasionally an oppressive, amount of *vapour* with heated air, and all the Baths among northern and eastern nations, in modern times, have been remarkable for this very serious defect. The ventilation, also, being defective, tended to make their atmosphere more oppressive, while the higher temperatures which the body is capable of supporting, with salutary effect, could not be maintained. But, with all their imperfections, even such Baths are far preferable to none; and Dr. Clarke laudably advocated their adoption in England, but without success.

The author of *Letters from Scandinavia* observes that "the eyes of a Russian gladden with rapture, when he speaks of the bagnio; it is his *ne plus ultra* of mortal bliss." He also describes a primitive kind of bath in use among the Finlanders, the construction being very imperfect, and the *modus operandi* somewhat similar to that practised in Russia, and also, as we shall see, in Japan, America and Ireland. "The Finlanders," he says, "generally go to the bath twice a week. The bath is a small wooden building, within which is a sort of oven filled with round stones. Around these the fire is kindled until they have become red-hot, when water is thrown upon them, and the vapour from thence involves the bathers, who are seated upon benches in a state of nature, and occasions a greater or less degree of perspiration in the patients." But Acerbi, who visited Finland in 1798, is more particular in his description of the Fin Bath and customs. He says:—

"Another particular that appeared was very singular among the customs of the Fins was their Baths, and manner of Bathing. *Almost all the Finnish peasants have a small house built on purpose for a Bath;* it consists of only one small chamber, in the innermost part of which are placed a number of stones, which are heated by fire till they become red. On these stones thus heated water is thrown, until the company within be involved in a thick cloud of vapour. In this innermost part, the chamber is formed into two storeys for the accommodation of a greater number of persons within that small compass; and it being the nature of heat and vapour to ascend, the second storey is, of course, the hottest. Men and women use the Bath promiscuously, without any concealment of dress, or being the least influenced by any emotions of attachment. If, however, a stranger open the door, and come on the bathers by surprise, the women are not a little startled at his appearance, for, besides his person, he introduces with him, by opening the door, a great quantity of light, which discovers at once to their view their situation, as well as forms. Without such an accident they remain, if not in total darkness, yet in great obscurity, as there is no other window besides a small hole, nor any light but what enters in from some chink in the roof of the house, or the crevices between the pieces of wood of which it is constructed.

"I often amused myself by surprising the bathers in this manner, and I once or twice tried to go in and join the assembly, but the heat was so excessive that I could not breathe, and in the space of a minute at most, I verily believe, must have been suffocated. I sometimes stopped in for a moment, just to leave my thermometer in some proper place, and immediately went out again, where I would remain for a quarter of an hour, or ten minutes, and then enter again, and fetch the instrument to ascertain the degree of heat. My astonishment was so great that I could scarcely believe my senses, when I found that those people remain together, and amuse themselves, for the space of half-an-hour, and sometimes a whole hour, in the same chamber heated to the 70th or 75th degree of Celsius (158° and 167° Fahr). The thermometer in contact with those vapours become so hot, that I could scarcely hold it in my hands.

"The Finlanders, all the while they are in this hot Bath, continue to rub themselves, and lash every part of their body with switches, formed of twigs of the birch tree. In ten minutes they become as red as raw flesh, and have altogether a very frightful appearance. In the winter season they frequently go out of the Bath, naked as they are, *to roll themselves in the snow*, when the cold is 20 and even 30 degrees below zero. They will sometimes come out, still naked, and converse together, or with any one near them, in the open air. If travellers happen to pass by while the peasants of any hamlet, or little village, are in the Bath, and their assistance is needed, they will leave the Bath, and assist in yoking or unyoking, and fetching provender for the horses, or in anything else, without any sort of covering whatever, while the passengers sit shivering with cold, though wrapped up in a good sound wolf's skin. There is nothing more wonderful than the extremities of heat and cold which man is capable of enduring through the power of habit.

"The Finnish peasants pass thus instantaneously from an atmosphere of 70 degrees of heat to one of 30 degrees of cold, a transition of 100 degrees (212° Fahr.), which is the same thing as going out of boiling into freezing water!—and what is more astonishing, without the least inconvenience, while other people are very sensibly affected by a variation of but five degrees, and in danger of being affected with rheumatism by the most trifling wind that blows. Those peasants assure you, that without the hot vapour Baths they could not sustain as they do, during the whole day, their various labours. By the Bath, they tell you, *their strength is recruited as much as by rest and sleep.* The heat of the vapour mollifies to such a degree their skin, that the men easily shave themselves with the most wretched razors, and without soap."—*Acerbi's Travels through Sweden, Finland, and Lapland, in* 1798–9, vol. i., p. 297, &c.

The author states that he was subsequently induced to take a Bath, and found by experience that his fears respecting the heat were imaginary, though the Bath was so imperfect. He says:—

"The heat of the vapour rose to 50° of Celsius (122° Fahr.); at first I felt a violent oppression, and had it quickly augmented, I believe, naked as I was, I should have made my escape from the Bath; but, forcing myself to persevere, I became gradually accustomed to it, and after some time was able to support a heat of 65 degrees (149° Fahr.). Under this heat it was extreme pleasure to throw water upon the head and to feel it running all over the body."—Vol. i., p. 338.

In his *Account of the Manners and Customs of the Modern Egyptians*, Lane devotes a chapter to a minute description of the Bath, illustrated with plans. He says—"Bathing is one of the greatest luxuries enjoyed by the people of Egypt. The inhabitants of the villages of this country, and those persons who cannot afford the trifling expense incurred in the public bath, often bathe in the Nile. . . . The rich have Baths in their own houses, but men who have this convenience often go to the public Bath; and so also do the ladies, who, on many occasions, are invited to accompany there their female friends.

There are, in Cairo, between *sixty* and *seventy* Hhammams, or baths, to which the public have access for a small expense."

Denon, who accompanied Bonaparte to Egypt, says, in his *Travels*, that, "not knowing what to do with my inflamed eyes, I went to the Baths of the town (Girgeh), and found much ease from this remedy." He does not describe the Bath with the particularity that Lane does, but he took a sketch of it, which he gives; and it represents the bather sitting on a marble seat in the centre of the Bath, with the attendant shampooing him, while another is standing by pouring tepid water over him, which runs all over the floor. This is the great evil of all such very imperfect modes of washing, as the atmosphere soon becomes unpleasantly overcharged with vapour.

Even in intertropical Africa the principal of the Bath prevails, and is variously applied for curative purposes—hot sand being a medium employed for producing heat. Daniell, in his *Medical Topography and Diseases of Guinea*, says the native doctors pay marked attention to the due action of the cutaneous tissues, as a means of relieving disease:—

> "The Mahomedan code of laws, whose sanitary injunctions are so well adapted for the advancement of the moral and physical condition of the barbarous pagan tribes in Central Africa, strictly enjoins not only abluent but other hygienic measures for the promotion of cleanliness, and the proper discharge of the cutaneous functions. The inhabitants of most of the maritime localities in the Bights are fully acquainted with the importance of these views, and treat *the remittent and other fevers* to which they are subject by endeavouring to excite a *long-continued and copious exudation of sweat* by the aid of heated sand and hot water.
>
> "In some countries the patient is placed close to a large fire, whilst in others he is held over it, water being slowly dropped thereon, so that the steam as it ascends may act on the affected portion of the body. After a careful observation of the good effects of this remedial system, I was led to pay more particular study to the utility of its application, and at length to try a modified adaptation of it for the cure of adynamic remittent fevers, so destructive to European life. I have no hesitation in asserting that not only myself, but *many others who have experienced its efficacy by the speedy restoration to health, can vouch for its superiority over the ordinary practice* of venesection, saline purgatives, and large doses of calomel, &c."—P. 119.

The Greek Christians, as already observed, had more sense than their Roman brethren, and did not abandon the Bath because of its Pagan origin and decorations; they wisely preserved it; and Constantinople possessed some splendid public Baths—though not on such a scale of magnificence as those of the Emperors at Rome—when it was captured by the Turks, A.D. 1463. It is related that the conquerors crowded to the public and private Baths of the luxurious city to refresh themselves after the fatigues of the assault.

Probably it was from the ancient Greeks that a knowledge of the Bath was first conveyed to all the Asiatic and African nations, where it has existed from time immemorial. It is not easy to determine to what precise period the descriptions in the "Thousand and One Nights"—popularly known as the *Arabian Nights' Entertainment*—refer; but fictitious though the narratives are, the customs and manners of the people are faithfully enough depicted, and in no respect more so than in showing the high estimation in which the Bath was held throughout the East many long centuries ago. From the story of Abooseer and Abookeer, we may learn how, in all probability, a knowledge of the Bath was diffused among the nations:—

> "So when Abooseer knew that there was not a Bath in the city, and that its inhabitants knew not the Bath, nor what kind of a thing it was, he repaired to the council of the King, and went into him, and having kissed the ground before him and prayed for him, said to him, 'I am a man of a strange country, and my trade is that of a Bath-keeper, and I entered thy city, and desired to repair to the Bath, but saw not in it even one Bath; and how is it that the city that is of this beautiful description is without a Bath, which is one of the best of the delights of the world?' So the King said to him, 'What is the Bath?'"

Abooseer describes the Bath, and assures the King, "thy city will not be a perfect city unless there be in it a Bath." Whereupon he was rewarded, and ordered to select a proper site and construct a Bath. When the building was completed and furnished, a crier was sent forth—

> "To cry in the city, and to say, 'O creatures of God, repair to the Bath, which is named the Bath of the Sultan.' So the people came thither,

and he ordered the Mamlouks to wash the bathers. The people descended into the tank, and came up; and, after they had come up, they sat upon the raised floor, while the Mamlouks rubbed them as Abooseer had taught them; and the people continued to enter the Bath, and to gratify their desire thereby, and go forth without paying, for the space of three days.

"After that, on the fourth day, Abooseer invited the King to the Bath. So he mounted, with the great men of his empire, and they went thither. He pulled off his clothes and entered the inner department; and Abooseer entered and rubbed the King with the bag, removing from his person the impure particles like twists of thread, and showing them to him, whereat the King rejoiced. . . After Abooseer has washed his skin, he mixed for him some rosewater with the water of the tank; and the King descended into the tank and came forth, and his skin was softened, and he experienced a liveliness which in his life he had never known before. Then after that Abooseer seated him upon the raised floor, and the Mamlouks proceeded to perform on him the operation of gently rubbing and pressing him, while the perfuming vessels diffused the odour of aloes-wood. And the King said, 'O master! is this the Bath?' Abooseer answered 'Yes.' And the King said to him, 'By my head, my city hath not become a city, save by this Bath!'"—*Lane's Edition*, cap. 27, p. 545, &c.

In Klanikoff's *Travels in the Khanet of Bokhara*, in 1843, there is a description of the Bath, which answers in all essential particulars to that on the hot-air principle among the ancient Greeks and Romans:—

"The baths of Bokhara consist of four compartments. The first is the ante-chamber, with carpets spread on the floor. Two or three small looking-glasses of Russian manufacture are stuck into the walls. Here the visitors throw off their upper dress, before they are ushered into the second apartment, having a warmer temperature than the first. The bathers divest themselves in this room of their remaining clothes, and, wrapping a lung, or bathing girdle, round them, step thence into the third room, which is the hottest of the three. Here, seated on the floor, you wait until a strong perspiration comes over you, after which you pass into the fourth apartment, where you lay down with your chest on a carpet, and give yourself up to the man whose business it is to crack all your joints. But the skill of these crackers of joints at Bokhara is said to be much inferior to that of their profession in Turkey; for though I was in the hands of the most desperate of their gang, they never could make all my joints crack, which is said to be the case in the Ottoman Empire. After this noisy part of the operation is over, they proceed to rub you with a coarse hair-cloth, and finish by pouring cold water over you.

"The faithful get shaved on such occasions, and then repair into the second apartment, from which they pass into the first, where the amateurs rest and sip their tea. Baths at Bokhara, as well as in Turkey, are heated from below, and are not very comfortable. The best I saw were those of Mis-ghiran and Basari Hojce.

"The usual expenses of such Baths are one pûl for taking care of the clothes; five pûls for the use of the Bath; from seven to thirty pûls for rubbing and scraping; so that the outside of the expense does not exceed one tenga. The city has sixteen principal Baths."—*De Bodes' Translation*, p. 112, &c.

Mr. Ellis, in his *Journal of the Embassy to China*, in 1816, describes a Chinese Bath that he visited at Nankin:—

"Near this temple is a public vapour Bath, called, or rather miscalled, The Bath of Fragrant Water, where dirty Chinese may be stewed clean for ten chens, or three farthings. The Bath is a small room of one hundred feet area, divided into four compartments, and paved with coarse marble. The heat is considerable; and as the number admitted into the Bath has no limits but the capacity of the area, the stench is excessive; altogether I thought it the most disgusting cleansing apparatus I had ever seen, and worthy of this nasty nation."—Vol. ii., p. 13.

But as Erasmus Wilson observed:—"What would Mr. Ellis say of a country in which there existed no *cleansing apparatus* whatever?—for example his own." Such home questions, however, are not pleasant. Mr. Fortune, who visited the Celestial Empire in 1842-8, as Botanical Collector to the Horticultural Society of London, supplies the following description of a Chinese Bath:—

"In the town of Shanghae, as well as in many other large Chinese towns, there are a number of public hot-water bathing establishments, which must be of great importance as regards the health and comfort of the natives. I will describe one which I passed daily during my residence in Shanghae.

"There are two outer rooms used for undressing and dressing; the first and largest is for the poorer classes; the second, for those who consider themselves more respectable, and who wish to be private. As you enter the largest of these rooms, a placard, which is hung near the door, informs you what the charges are, and a man stands there to receive the money on entrance. Arranged in rows down the middle and round the sides of both rooms are a number of small boxes or lockers, furnished with lock and key, into which the visitors put their clothes, and where they can make sure of finding them when they return from the bathing room, which is entered by a small door at the farther end of the building, and is about thirty feet long and twenty feet wide; the water occupying the whole space, except a narrow path round the sides. The water is from one to eighteen inches deep, and the sides of the Bath are lined with marble slabs, from which the bathers step into the water, and on which they sit and wash themselves; the furnace is placed on the outside, and the flues are carried below the centre of the Bath.

"In the afternoon and evening this establishment is crowded with visitors; and on entering the bath-room, the first impression is almost insupportable. The hot steam or vapour meets you at the door, filling the eyes and ears, and causing the perspiration to run from every pore of the body; it almost darkens the place; and the Chinamen seen in this imperfect light, with their brown skins and long tails, sporting amongst the water, render the scene a most ludicrous one to an Englishman.

"Those visitors who use the common room pay only six copper cash; the others pay eighteen, but they have, in addition, a cup of tea and a pipe of tobacco from the proprietors. I may mention that 100 copper cash amount to about 4½d. of our money, so that the first class enjoy a hot-water bath for about *one* farthing! and the other a bath, a private room, a cup of tea, and a pipe of tobacco for something less than one penny!"—*Two Visits to the Tea Countries of China*, vol. i., p. 197.

From China it may be presumed that a knowledge of the bath reached Japan, and we have an interesting account of its existence there two centuries ago, though in a very primitive and imperfect fashion. The account is contained in Kampfer's *History of Japan*. He visited the country in 1690, and spent two years there. He was the first scientific European and accurate observer to whom we are indebted for a correct knowledge of that singular people. He says:—

"The bathing-place, commonly built on the back side of the garden, contains either a hot-house to sweat in, or a warm bath, and sometimes both. It is made warm and got ready every evening, because the Japanese usually bathe or sweat after their day's journey is over, thinking by this means to refresh themselves, and to sweat off their weariness. As they can undress themselves in an instant, so they are ready at a minute's warning to go into it; for they need but untie their sash, and all their clothes fall down at once, leaving them quite naked, excepting a small band which they wear close to the body about their waist.

"Their hot-house, which they go into only to sweat, is an almost cubical trunk, or stove, raised about three feet above the ground, and built close to the wall of the bathing-place, on the outside—not quite six feet high; but about nine feet long, and of the same breadth. The floor is laid with small planed laths or planks, some few inches distant from each other, both for the easy passage of the rising vapours, and the convenient outlet for the water. You go, or rather creep in through a small door or shutter. There are two other shutters, one on each side, to let out the superfluous vapour. The empty space beneath, down to the ground, is enclosed with a wall to prevent the vapours from getting out on the sides.

"Towards the yard, just beneath the hot-house, is a furnace, part of which stands out towards the yard, where they put the necessary water and plants. This part is shut with a clap-board when the fire is burning, to make all the vapours ascend through the inner and open part into the hot-house. There are always two tubs, one of warm the other of cold water, for such as have a mind to wash themselves."—Vol. ii., p. 424.

The Japanese and Chinese bath present, no doubt, a very rude departure from the magnificence and grandeur of the Greek and Roman models, yet the *principle* in all is the same, and the defence can be offered for them that a sensible wife pleaded for rather an indifferent husband—"*he's bad enough to be sure, still he's a precious sight better than none.*" However primitive in construction and in operation, they had the effect of *thoroughly flushing the pores of the skin* far more effectually than any form of water bath could possibly do, and it is by the potency of its action in the exudation of the excrementitious matters of the body through the medium of the skin, that the Oriental bath exercises its acknowledged sanitary and sanative influences. *Visible vapour* is not in anywise essential to the efficiency of the bath. Quite the contrary—*it is an imperfection.* Its use clearly arose from the want of a more effective mode of heating the bath, and maintaining the necessary temperature. It was sought to supply the place of a properly constructed heating apparatus, by throwing water on the hot stones or bricks, which created a higher temperature than could be otherwise obtained, owing to the defective means employed. The Japanese, however, endeavoured, by the combustion of aromatic plants in the stove, to make the vapour as pleasant as possible.

By what means a knowledge of the hot-air Bath reached the American continent can only be the subject of speculation. Probably the use of thermal springs led to the discovery and application of the principle among the Indians, as we conjecture it did among whatever people first constructed a hot-air Bath in the East. Be this as it may, however, it is certain that the aborigines understood the principle, and in their own primitive way, availed themselves of it, with confidence and success, as a *curative agent in disease*, for ages before a European is recorded to have set foot upon their shores. In Ogilby's *America*, published in 1671, we read that the natives of New Netherlands, now New York—

> "Are very patient of heat, cold, hunger, and thirst. They have a strange way of using stoves, which are set in the ground and covered with earth, into which they go through a little door. A sick person coming into the same, sets himself down, and places hot stones around about him; which done, and having sweat a considerable time, he leaps into cold water, by which he finds ease of all his distempers."—Page 178.

A very descriptive account of the Indian mode of using the Bath in sickness was supplied by the celebrated William Penn, the illustrious founder of Pennsylvania, to Dr. Baynard, and published by him in his and Sir John Floyer's *Psychrologia*. He describes the process, of which he was an eye-witness nearly two centuries ago, as follows:—

> "As I find the Indians upon the Continent more incident to fevers than any other distempers, so they rarely fail to cure themselves by *great sweating*, and immediately plunging themselves into cold water, which they say *is the only way not to catch cold.*
>
> "I once saw an instance of it, with divers more in company. For being upon a discovery of the back part of the country, I called upon an Indian of note, whose name was Tenoughan, the Captain-General of the clans of Indians in those parts. I found him ill of a fever, his head and limbs much affected with pain, and, at the same time, his wife preparing a bagnio for him.
>
> "The bagnio resembled a large oven, into which he crept by the door on the one side, while she put several red-hot stones in at a small door on the other side thereof, and then fastened the doors as closely from the air as she could.
>
> "Now, while he was sweating in this bagnio, his wife (for they disdain no service) was, with an axe, cutting her husband a passage into the river (being the winter of 1683, the great frost, and the ice very thick) in order to the immersing himself after he should come out of the bath.
>
> "In less than half-an-hour he was in so great a sweat, that when he came out he was as wet as if he had come out of a river, and the reek or steam of his body so thick that it was hard to discern anybody's face that stood near him. In this condition, stark naked, his breach clout only excepted, he ran to the river, which was about twenty paces, and *ducked him-*

*self twice or thrice therein*, and so returned (passing only through his bagnio to mitigate the immediate stroke of the cold) to his own house, perhaps twenty paces further, and, wrapping himself in his woollen mantle, lay down at his length near a long (but gentle) fire in the middle of his wigwam, or house, turning himself several times till he was dry, and then he rose and fell to getting us our dinner, seeming to be as easy and *well in health as at any other time.*"

This letter certainly supplies a very interesting description of the adaptation, by the American Indians, of the principle of the Oriental Bath. We may be assured that rude nations would never have preserved that principle had they not experienced its great value—their philosophy being necessarily of too practical a character to permit the sacrifice of facts to sustain irrational theories. Gent, in his *History of Virginia*, also describes the Indian mode of using the sweating bath as prescribed by the doctor, or "medicine-man"—

"The doctor takes three or four large stones, which, after having heated red-hot, he places in the middle of the stove, laying on them some of the inner bark of oak, beaten in a mortar, to keep them from burning; this being done, they (the patients) creep in, six or eight at a time, or as many as the place will hold, and then close up the mouth of the stove, which is usually made like an oven in some bank *near the water-side;* in the meanwhile, the doctor to raise a steam, after they have been stewing a little time, pours cold water on the stones, and now and then sprinkles the men to keep them from fainting; after they have sweat as long as they can well endure it, they sally out, and (though it be in the depth of winter) forthwith plunge themselves over head and ears in cold water, which instantly closes up the pores and *preserves them from taking cold.*"

Captain Carver, who travelled through the interior parts of North America in 1766–7–8, says "the Indians in general are healthy, and subject but to few diseases." As in all rude states of society their priests are their physicians, and disease is regarded as the product of some supernatural agency.

"The disorder to which they are most subject is the pleurisy; for the removal of which they apply their grand remedy and preservative against the generality of their complaints—*sweating.*

The manner in which they construct their stoves for this purpose is as follows:—They fix several small poles in the ground, the tops of which they twist together so as to form a rotundo: this frame they cover with skins or blankets; and they lay them on with so much nicety that the air is kept from entering through any crevice; a small space being only left just sufficient to creep in at, which is immediately after closed. In the middle of this confined building they place red-hot stones, on which they pour water till a steam arises that produces a great degree of heat.

"This causes an instantaneous perspiration, which they increase as they please. Having continued in it for some time they immediately hasten to the nearest stream and plunge into the water; and, after bathing therein for about half-a-minute, they put on their clothes, sit down, and smoke with great composure, thoroughly persuaded that the remedy will prove efficacious.—*Travels*, p. 390.

Some tribes use different forms of Bath, but they are all directed to the one great end—sweating. In the *History of the Expedition* under Captains Lewis and Clark to the sources of the Missouri and across the Rocky Mountains to the Pacific, during 1804-5-6, there are references to the primitive Baths used by several tribes. The Chopunnish tribe formed their bath thus:—

"Just above this camp we had passed a tent, near which was an Indian bathing himself in a small pond or hole of water, warmed by throwing in hot stones. They are generally healthy—the only disorders which we had occasion to remark being of a scrofulous kind, and for these, as well as for the amusement of those who are in good health, hot and cold bathing is very commonly used."—Vol i. p. 584.

On their return from the Pacific they fell in with a tribe that used the sweating-house similar to that described by Penn and Carver:—

"We observed a vapour bath or sweating-house in a different form from that used on the frontiers of the United States or in the Rocky Mountains. It was a hollow square of six or eight feet deep, formed in the river bank by damming up with mud the other three sides, and covering the whole completely,, except an aperture about two feet wide at the top. The bathers descended by this hole, taking with them a number of heated stones and jugs of water, and after being seated round the room throw the water on the stones till the steam becomes sufficiently high for their purposes.

"The Baths of the Indians in the Rocky Mountains are of different sizes—the most common being made of mud and sticks, like an oven, but the mode of raising the steam is exactly the same. . . Almost universally these Baths are in the neighbourhood of running water, into which the Indians plunge immediately on coming out. . . This Bath is employed either for pleasure or for health, and is used indiscriminately for rheumatism, venereal, or, in short, for all kinds of diseases."—Vol. ii. p. 4.

In *principle*, the same form of bath is, at the present day, in use among the Indians in Mexico, California, and other parts of the great American Continent. Some tribes only avail themselves of the bath as *a curative agent in disease*, while others employ it as a *luxury of daily life*, and they are remarkable for the development of physical strength which they exhibit. Von Tempsky, in his *Narrative of a Journey* in Mexico, Guatemala, and Salvador, in 1853-5, thus describes the habitual use of the bath by the Catarina Indians—

> "Water being in that valley, in certain seasons, a commodity rather difficult to get at from the village (Santa Catarina), as the descent to the river is a work of good three hours, I suppose that this inconvenience for frequent bathing must have been the source of a peculiar custom of the people, said to be *as ancient as their tribe*. This is, the use of hot bath-houses. *Every house* has next to it one of them, in the shape of an oven, built of sun-bricks, or round stones. It has no opening but a low door, near the ground, big enough to allow a person to creep into it. The interior is heated by means of hot stones. A bowl of water is put in, the naked bather hocks on the ground, and the door is closed upon him. The heat evaporates the water in the bowl, and, surrounding the body with an atmosphere of warm moisture, accelerates the process of evaporation, that soon streams down the skin like rain. When the bather feels himself thoroughly soaked, he comes forth, rubs himself dry, and is thus well bathed. In the Sierra Nevada, in California, I have seen similar huts, built of reeds and earth, for a similar purpose, but *only used by the Indians there in cases of disease*."—Page 389.

The author of *The Ten Tribes Historically Identified* informs us that the Mexican physicans, for the preservation of health and cure of distempers, esteem the Bath very highly. It is formed of bricks, in shape like an oven; and "opposite the entrance there is a furnace of stone or raw bricks, with its mouth outwards to receive the fuel from without, and a hole above to carry off the smoke." He says:—

> "When any one goes in to bathe, he first lays a matrass within the Temazcalli, or bath, a pitcher of water, and a bunch of fragrant herbs. He then orders a fire to be made in the furnace, which is kept burning until the stones which join the Temazcalli and furnace are quite hot. The

person who is to use the Bath enters, accompanied by a domestic. He is either nude or slightly covered. As soon as he enters, he shuts the entrance close, but leaves the air-hole at the top open for a few minutes to let out the smoke, should any have collected in the vault. When it is all out he stops up the air-hole. He then throws water on the hot stones, from which immediately rises a thick vapour to the top of the Temazcalli. While the person lies on the mat, the domestic drives the vapour downwards, and with a bunch of herbs gently beats the patient over the ailing part, the herbs being first dipped in water, which is, by that time, a little warm. The patient falls immediately into a soft and copious perspiration, which is increased or diminished at pleasure, according as the case requires. . . .

"The Temazcalli has been successfully used in various disorders, especially those connected with the digestive organs. The Indian women use it frequently, *and always after childbirth;* as also persons *who have been stung by some poisonous reptile.* The Temazcalli is so common, that in every place inhabited by the Indians there are many of them."—*Appendix*, p. 363.

It certainly is remarkable that a somewhat similar adaptation of the principle of the Oriental bath, which we find existing ages ago among the Japanese and on the American Continent, should also have been in use in Ireland. By what means, or at what remote period, a knowledge of that principle first reached Ireland, it is now impossible to determine; but we have unquestionable evidence that the bath has existed for ages in Ireland, and that in some districts it is still in use. It appears, however, to have been exclusively employed for its *curative virtues in certain diseases.* According to Dr. Haughton, in his *Essay on the Oriental Bath,* "Two varieties of *Tig Allui,* or sweating-houses, exist in Ireland, one kind being capable of containing a good many persons, and the other only intended for a single occupant."

A lady supplied Mr. Urquhart with the following description of the Irish Bath, as she recollected having seen it in her early days:—

"With respect to the sweating-houses, as they are called, I remember about forty years ago (about 1810), seeing one in the island of Rathlin, and shall try to give you a description of it. It was built of basalt stones, very much in the shape of a bee-hive, with a row of stones for the person to sit on when undergoing the operation. There was a hole at the top, and one near the ground, where the person crept in and seated him or herself, the stones having been heated in the same way as an oven for baking bread is, the hole on the top being covered with a sod while being heated, but, I suppose, removed to admit the person to breathe. Before entering, the patient was stripped naked, and on coming out, dressed again in the open air. The process was reckoned a sovereign cure for rheumatism and all sorts of pains and aches."

This form of bath was obviously designed to accommodate more than one person at a time. Dr. Tucker, of Sligo, gives a description of a bath as constructed to admit one person only:—

> "It is built of stone and mortar, and brought to a round top. It is sufficiently large for one person to sit on a chair inside, the door being merely large enough to admit a person on his hands and knees. When any of the old people of the neighbourhood are seized with pains, they *at once have recourse to the sweat-house*, which is brought to the proper temperature by placing therein a large turf fire, after the manner of an oven, which is left until it is burned quite down, the door being a flat stone and air-tight, and the roof, or outside of the house, being covered with clay to the depth of about a foot, to prevent the escape of heat.
>
> "When the remains of the fire are taken out, the floor is strewn with green rushes, and the person to be cured is escorted to the bath by a second person carrying a pair of blankets. The invalid having crept in, plants himself or herself in a chair, and there remains until the perspiration rolls off in large drops.
>
> "When sufficiently operated on, he or she, as the case may be, is anxious to get out, and the person in waiting swaddles him up in the blankets, and off home and then to bed. I have heard old people say that they would not have been alive twenty years ago, only for the sweating-house."

As to the materials employed in the construction of these sweating-houses, Dr. Haughton observes that "In Rathlin Island the material is turf and loose stones. In Fermanagh and Tipperary stone and mortar, or clay and stones covered with sods, whilst (some twenty years ago, *i.e.*, 1840) large slates, placed against a hollow bank, were used for the same purpose, near the slate quarries of Kilkenny." Dr. Tucker says—"Remains of the *Tig Allui* are also found in the County Tyrone of the following dimensions:—"Five feet in height, nine in length, and four in width, being built of solid masonry, and shaped like a bee-hive at the top."

With as much brevity as the subject permitted, we have thus traced, from the remotest ages, the existence of The Bath over every quarter of the globe, and it will be observed that whether used as a curative agent in disease, or enjoyed as a luxury, the great object always in view was to bring into play the action of Air, Water, and Heat on the human body, so as to excite perspiration. To attain this end, we have seen that various rude and imperfect means were employed; but however faulty and primitive the contrivances resorted to, they were nevertheless such as to produce the desired effect. The great Therapeutic properties of The Bath, it is true, could not be fully developed by the defective constructions so generally used, for the skin being at once an exhalent and an absorbent, it is essential to the full, vigorous, and healthful action of The Bath, as will be amply explained, that while the excrementitious matter—the refuse of the blood—is exuded by copious perspiration, an adequate compensating supply of oxygen, to replenish and invigorate, should be inhaled and absorbed. Hence a plentiful supply of pure Air and Water is essentially necessary; but in so far as benefit was derived from the imperfect application of the principle of The Bath, by the nations that employed it, we may learn to appreciate its true value when carried out scientifically in accordance with the unerring teaching of physiology.

Candidly considering the history of The Bath, the conclusion irresistibly forced on the mind is—that its utility alone was the cause of its universality, for it surely would be ridiculous to suppose that it could possibly have survived the vicissitudes of ages, had it not possessed *a healthful and curative potency*, which commended it to *the practical wisdom of mankind.* As an institution valued and honoured, the Bath flourished in the most renowned nations of antiquity—the Assyrians, Persians, Egyptians, Greeks, and Romans, and when it was buried amid the splendid ruins of the Greek gymnasiums, and shared the destructive fate that overwhelmed the resplendent architectural glories of Imperial Rome, it nevertheless survived in far distant parts of Asia, among the untutored tribes of the American Continent, and in our own island. The *universality of the the bath,* therefore—its existence *during thousands of years in every quarter of the globe,* furnishes *prima facie* proof of its value far superior to any that mere abstract reasoning could supply.

It might have been imagined that such an institution would naturally commend itself to a medical profession conscious of its high moral obligations, if not suddenly at first, at least *after* some of the most eminent medical men of the day had tested its merits and certified to its great therapeutic power. But the Bath has experienced no appreciative welcome from the profession *as a body,* more particularly from the teachers and leaders of medical opinion.

"We ask ourselves," says Erasmus Wilson, one of the first authorities of the day, "not what disease will be benefitted by the thermæ? but *what disease can resist its power?* Yet, notwithstanding a "cloud of witnesses" have given similar testimony, those who control medical teaching, opinion, and practice, still remain obdurate, and Drug Medication still goes on in its old ways, and will continue to do so, as long as credulous patients are content to remain the passive victims of its malpractices.

## CHAPTER IV.

*The Bath in Britain after the departure of the Romans—Its subsequent destruction—The Baths of Europe during the Middle Ages—Early advocates of the revival of the Roman Bath—Apathy of Medical men—The story of its ultimate revival and successful establishment—Opposition of Drug practitioners—The Bath the perfection of Hydropathic practice.*

It is now nearly fifteen hundred years since the last of the Roman legions departed from Britain, leaving behind them the Hot-air Bath as an established institution. From the numerous remains that have been discovered in various places it is evident there were Baths in all the towns and cities garrisoned by the Roman troops, who used it not so much as a luxury as for its undoubted sanitary and invigorating influences. But there is no evidence that the inhabitants of the country ever regarded it with favour; on the contrary, the probability is that, as a custom introduced by their conquerors, they looked upon it with suspicion, and were averse to its adoption. The civil commotions that disturbed the country, and rendered anarchy prevalent long after the retirement of the Romans, was also unfavourable to the permanence of any institution, however excellent in itself, that was introduced by them; and if the Bath did survive until the inhabitants generally embraced Christianity, it appears most probable that its use was then forbidden as sinful.

The Druids had their sacred springs, round which were centred popular superstitions, and the early Christian priests, who soon became adepts in the craft of their Pagan predecessors, made use of those superstitions, and gave them a new direction to augment their own influence. Churches were erected in the vicinity of the ancient sacred springs, which were associated, by dedication or otherwise, with the names of reputed martyrs and saints, by whose intercession miraculous cures were procured, which cast into the shade all the marvels that had been effected by the waters while under the influence of Pagan divinities. Such pious frauds were first countenanced for the purpose of facilitating the transition of the ignorant and superstitious from their old to the new faith, and confirming them therein, while they were afterwards systematically encouraged as affording a profitable source of income. In this way the impostures of Paganism were imitated, and Christians were taught that the Holy Waters had no healing powers for the ailing who resorted to them, unless they submitted, with an unreasoning obedience and an implicit faith, to all the rites and ceremonies prescribed for their use.

If, then, the Roman Bath survived for any length of time in Britain after the departure of its introducers, we may be satisfied that it utterly perished on the general conformity of the inhabitants to Christianity. We find no reference to it in any of the early Christian writers, and no trace of it in ancient chronicles, whereas there is ample evidence of the superstitions that were cherished concerning "Holy Wells"—superstitions, indeed, which thoroughly impregnated the popular mind, and have been preserved with a remarkable freshness down to our own times.

We have seen how the principle of the Roman Bath was preserved in various countries, however imperfectly it was carried out; but although warm, tepid, and vapour Baths existed in Italy, Germany, France, and Britain during the middle ages, still there was no effort to improve them after the ancient models. The thermal springs in Germany were brought into revived notice at the commencement of the ninth century by Charlemagne, who, having derived benefit from the use of the mineral springs of Aix-la-Chapelle, had a capacious bathing basin erected for his own use and that of his family. Courtly example is infectious, and attention was thus drawn to the thermal springs of Italy and France, as well as to those of Germany. It became fashionable to resort to them, and gradually bathing attained such popularity that public Baths were constructed in the principal towns and cities. Grosley, in his *Ephemerides Troyennes,* says:—

> "The barbarism of the middle ages not being able to attain magnificence, confined itself to the convenience of the public baths and other establishments which were erected in Europe. The idea was due to the Arabs, among whom the arts and sciences had found an asylum. The Crusades and commerce had opened up to Europeans the countries which flourished under the rule of this people, and the natural taste for imitation did the rest. The Vapour and Public Baths were, for a long period, as much frequented in Europe as they were at the present day in the Levant. People were attracted to them for the sake of health and cleanliness; but above all, from the want of society felt by persons who saw little of each other except in these places. Some took Water Baths; others Vapour Baths; while several came only to gossip, comfortably protected from the cold. For these last, the Baths were what the stoves of Germany, the *restaminets* of Holland, and the *cafés* of Paris are to this day." See also Lagneau's *Traité Complet des Bains.*

In his *France in the Sixteenth Century,* Marchangy says, "It was only at the Baths, at Church, or in sickness that women ever saw each other. The men also assembled at the Bath, the barber's, the wine-shops, and the market-places. There were private baths in the hotels, and persons asked to dinner were, at the same time invited to bathe." In his *Historical Essays on Paris,* St. Foix states that "the use of Vapour Baths was formerly as common in France, even among the common people, as it is and always has been in Greece and Asia. They went to them almost daily. St. Rigobert caused baths to be built for the Canons of his Church, and supplied wood for heating them. Pope Adrian recommends the clergy of each parish to go to bathe, in procession, every Thursday, singing psalms the while."

In the sixteenth century there was a marked decline over Western Europe in the public taste for warm bathing, which has been ascribed to the wearing of linen becoming general—the supposition being that its use obviated the necessity for frequent ablutions as a matter of cleanliness; while for any other healthful purpose bathing does not appear to have been generally appreciated, even by the medical profession. The practice was universally neglected; yet we find that occasionally intelligent minds sought to direct attention to the importance of the subject, and that the revival of the Roman Bath was advocated for more than two hundred years, before any one was found to practically appreciate its advantages and undertake its re-establishment.

In 1645, Laurence Joubert published at Frankfort a work on the *Baths of the Greeks and Romans*, and in 1673, Dr. John Archer published a work entitled *Every Man his own Physician*, which, says Dr. Hamilton, in his *History of Medicine*, "although little noticed, was a useful work in its day." Dr. Archer strongly recommended the Vapour Bath for rheumatism and other complaints. But the attempt to revive the Bath met with no encouragement, and this is largely attributable to the defective state of physiological knowledge, in consequence of which the grossest ignorance prevailed even among medical men concerning the action of heat and cold on the human system—an ignorance still too mischievously prevalent,—and not a college or learned society in Europe evinced the slightest disposition to undertake or encourage the rational investigation of the subject.

An effort was indeed made to introduce and popularise in medical practice the use of the Vapour Bath, but there was a sufficient reason for that in the fact of its being advocated as a means by which unfortunate patients could be more easily impregnated with poisonous medical substances, while in cases where the application of the *heat* of the Bath alone did exercise salutary influences, the happy results so produced could be readily enough ascribed to the action of the *medicated* vapour. Various publications appeared on the subject during the century that preceded the revival of the Roman Bath, and sulphur, mercurial, acid, and various other forms of medicated baths were advocated and employed; but any good that ever resulted from them was owing to the action of the *heat*, and not to that of the poisonous matter with which the vapour was surcharged.

Yet with some practitioners such baths are still favourably regarded, while they ridicule and affect to despise the simplicity, the purity, the incontestible potency, and unequalled salubrity of the Hot-Air Bath.

In 1769 Dr. Thos. Denman published a *Letter on the Construction and Use of Vapour Baths*, and in 1772 Cameron's admirable work on the *Baths of the Romans* appeared, with splendid illustrations after Palladio. Dr. Playfair published his *Method of Constructing Vapour Baths* in 1783; and in 1802 the philosophic Count Rumford gave to the world his excellent treatise on the *Salubrity of Warm Bathing*, in which he detailed his own experience, and, with great ability and earnestness, advocated the revival of the Roman Bath. He had been ordered by his physician to try the waters of Harrogate in the hope of shaking off the lingering and debilitating effects of a previous illness, and he says:—

> "At first I went into the Bath at about ten o'clock in the evening, and remained in it from ten to fifteen minutes, and immediately on coming out of it went to bed, my bed having been well warmed with a view to preventing my *taking cold.*
>
> "Having pursued this method some time, and finding myself frequently *feverish and restless after bathing*, I accidentally, in conversation, mentioned the circumstance to an intelligent gentleman who had long been in the habit of visiting Harrogate every year. He advised me to change my hour of bathing, and to stay longer in the bath, and, above all, to avoid going into a *warmed bed on coming out of it.* I followed his advice, and shall have reason all my life to thank him for it."

He took the Bath regularly every third day about two hours before dinner; on coming out he sat in his own room without a fire, and found himself no longer troubled with feverish heats. So far from feeling chilly, or particularly sensible to cold on coming out of the Bath, he found an insensibility to cold gradually growing upon him. He then commenced bathing every second day, and soon every day, with the most favourable results, though he says—

> "This experiment was thought to be very hazardous by many persons at Harrogate, and *even by the Physician*, who did not much approve of my proceedings; but as no inconvenience of any kind appeared to result from it,

and as I found myself growing stronger every day and gaining fresh health, activity and spirits, I continued the practice, and actually bathed every day, at two o'clock in the afternoon, for half-an-hour, at the temperature of 96 and 97 degrees of Fahrenheit scale, during thirty-five days."

From the experience acquired in his own case the Count was led to the true conclusion "that it *is not the waters*, but the *warmth* to which most, if not *all*, the good effects experienced from warm bathing ought to be ascribed." This conclusion established—and its truth is incontestible—the immeasurable superiority of *Air*, in comparison with *Water*, as the medium of a Bath, becomes at once self-evident. Because water cannot be safely used as the medium of communicating heat to the human body at a temperature beyond 100°, whereas air can be heated for ordinary bathing to 180°, and for remedial purposes in the treatment of disease far higher degrees, varying above 212°—the boiling-point of water—can be advantageously employed. It is this perfect command of temperature which the Hot-Air Bath places at the disposal of the scientific and skilled physician that constitutes its superlative merit, for by no other means can anything approaching to the same high ranges of temperature be obtained and used. This is entirely consistent with the experience of mankind; for, as Count Rumford observes :—

"Among those nations where warm bathing has been most generally practised water has seldom been employed, except occasionally, and *merely for washing and cleansing the skin*; and though washing in warm water is pleasant, and is, no doubt, very wholesome, yet remaining with the whole body, except the head, plunged and immersed in that liquid for so great a length of time as is necessary in order that a warm bath may produce its proper salutary effects, is not very agreeable, nor is it probably *either necessary or salutary.*

"With regard to the *pleasant* effects that result from the use of the warm bath, there never has been any difference of opinion, but still I am quite certain that *the true luxury of warm bathing is not understood in this country*; and till *the construction of our baths is totally changed*, and a different manner of using them adopted, we can never enjoy a warm bath as it ought to be enjoyed.

"As we must allow that in most cases, and particularly in matters of this kind, it is much more wise and prudent to adopt those arrangements and improvements which have been *the result of the experience of ages*, than to set down and attempt to invent anything new, I think we cannot do better than to *rebuild some of the baths which were left us by the Romans.* They most certainly understood warm bathing as well as any nation ever did. The plans they have left us may, therefore, be adopted with safety as *models for our imitation.*"

These sound opinions did not meet with an appreciative reception. Neither the professional nor the public mind was sufficiently enlightened to understand the true *Philosophy of Bathing*. Dr. E. D. Clarke, who travelled in various parts of Europe and Asia at the commencement of the present century, and whose description of the Russian Bath is quoted in the preceding chapter, was so impressed with the value of the process that he warmly advocated the establishment of public Baths in England as sanitary institutions. His observations are as applicable now as they were when written sixty odd years ago:—

"Eminent physicians have endeavoured to draw the attention of the English Government to the importance of *Public Baths*, and of countenancing their use by every aid of example and encouragement. While we wonder at their prevalence among all Eastern and Northern nations, may we not lament that they are so little known in our own country?"

We might, he says, "find reason to allow that erysipelas, surfeit, rheumatism, colds, and many other evils, especially cutaneous and nervous disorders, would be alleviated, *if not prevented, by a proper attention to bathing*. The inhabitants of countries where the Bath is constantly used have recourse to it in the full confidence of being able to remove such complaints, and *they are rarely disappointed*." He continues:—

"In England Baths are considered only as articles of luxury; yet throughout the vast empire of Russia, through all Finland, Lapland, Sweden, and Norway, *there is no cottage so poor, no hut so destitute, but it possesses its vapour Bath*, whither all the family resort, every Saturday at the least, and *every day in case of sickness*. Lady Mary Wortley Montague, in despite of all the prejudices then prevalent in England against inoculation, introduced this blessing from Turkey. And if some other patriotic individual of equal influence would endeavour to establish throughout Great Britain the use of warm and vapour Baths, the inconveniences of our climate might be done away with.

"Perhaps, at a future period, donations for Public Baths may become as frequent as the voluntary subscriptions whereby hospitals are maintained; and a grateful people may commemorate the service they have rendered to society by annual contributions for their support. But when we recollect that the illustrious Bacon in vain lamented the disuse of Baths among Europeans, we have little reason to indulge the expectation. At the same time an additional testimony to their salutary effects, in *affording longevity and vigorous health* to a people otherwise liable to mortal diseases from their rigorous climate and unwholesome diet, may conduce towards their introduction."—*Travels*, &c., vol. i., c. 8.

Such excellent advice was, however, unattended to, and although the importance of Hot-Air Baths was ably brought forward in various other publications, there was not even a disposition among the Teachers and Directors of medical opinion and practice to encourage the investigation of its alleged sanative utility, let alone to engage in the study of the subject themselves. This apathy was the more culpable, for there was an abundance of evidence that ought to have excited the profound attention of a Medical Faculty alive to the interests of medical science, and impressed with a consciousness of their moral obligations to society. The experiments of Drs. Fordyce, Blagden, and Dobson, in England, of Delaroche and Berger in France, and of several others, undertaken with a view of ascertaining the effects of high degrees of *dry Heat* on the animal body, and the actual introduction of heated air as an improvement on the Vapour Bath, might well, indeed, have claimed some notice from the members of a profession affecting to make the progress of medical science a study, and to qualify themselves to deal safely with the health and lives of their fellow-men. But the same careless apathy and intolerant opposition to salutary progress has always been a characteristic of the Heads and Guides of the Medical Profession, and the same censure—notwithstanding all additional light shed by Science and experience—is as truly applicable to its Teachers and Leaders to-day as during the most discreditable period of its history.

The celebrated Franklin, when unable to avail himself of cold bathing, had tried, with advantage, *cold air*, remaining for a length of time exposed naked in his own chamber, with the windows open. He recommended this practice; and it was found highly beneficial in relieving, for instance, feverish restlessness. The transition from *cold* to *warm* air was facilitated by the experiments already referred to, and a few enlightened Physicians—the disciples of Science rather than of Medicine—having tested its effects, commended such a form of Bath as a therapeutical agency of much greater potency than that of vapour. In 1819, Dr. Gower published a little work entitled *Auxiliaries to Medicine*, in which he advocated the use of warm air, and introduced an apparatus which he called the *Sudatorium*, for administering it as the medium of a Bath. This contrivance was somewhat similar to what is now in use as the "Lamp Bath." It consisted of a semi-cylindrical frame-work of wicker, laid high over the patient in bed, and covered with blankets. By means of a metallic tube communicating with the end of the frame, a stream of air, heated by a lamp placed at the extremity of the tube, was directed into the hollow space formed round the patient by the wicker covering. The warm air was not breathed by the patient, but rapid perspiration was readily induced; and imperfect as the apparatus was, in comparison with the proper Hot-Air Bath, still, as a substitute when nothing better could be obtained, it was not without beneficial properties. But even this simple means of relieving human suffering the Profession treated with ridicule and contempt, and would not favour its application.

In 1826, Dr. Gosse, of Geneva, sought to arouse the attention of the Faculty on the continent to the true value of Heat as a remedial agency in disease. In his work *Des Maladies Rhumatoides*, he mentions the afflictions in which he considered its application peculiarly efficacious, while he earnestly advocated the revival of the Roman Bath. Of Heat he says:—

> "The excitant which plays the most important *role* in the phenomena, whether of health or disease, is *caloric*—a fluid imponderable and incompressible, which pervades all organised existences. The reduction of the quantity of this fluid brings, as we have seen, weakness and disorder, whether general or local, in all nervous functions. It is, therefore, incontestible that its increase must augment their energy and contribute to the

restoration of their equilibrium. *No other agent can, therefore, be compared with this one* in the treatment of rheumatic disorders. It is, so to say, the soul of this treatment; and all other means can only be regarded as subordinate. Who can tell if even those substances which we define as *excitant* are not indebted to its presence for their properties? At least, we find amongst them principles eminently combustible, and which disengage a considerable quantity of light and of caloric, as also substances possessing a great affinity with the development of electricity. However, restricting ourselves for the present to the mere effects of the sum of its accumulation, it is clear we should make application of it chiefly in the intervals of congestion, and at the spot most distant therefrom. Nevertheless, in some of these cases—chilblains for instance—its local and immediate application is the most powerful of means for dissipating them. Its moderate action is *equally indispensible for overcoming the consequences of inflammation.* If the fibre be relaxed and humid, and the constitution lymphatic, dry heat is preferable. If either, on the contrary, nervous or vascular irritation, with a temperament nervous or sanguineous, it is desirous to combine moisture and heat.

"The efficaciousness of these means for *restoring the action of the skin* explains the immense advantages derived by the Greeks and Romans from the use of the Bath—advantages possessed in our times by the daily use of the like by the Russians and the nations of the East. We have the more to regret the negligence, in reference to such establishments, of the middle parts of Europe, that our more variable climate multiplies rheumatoid affections, and renders them more inveterate. We ought to put up prayers that the European governments may favour the introduction of such public establishments, and so bring within the reach of the citizens, unendowed with fortune, *this real panacea for the larger portion of the evils that assail mankind.*"—Page 59

Two years after the appearance of Dr. Gosse's work, an English writer strove to awaken attention to the important considerations involved in the revival of the Roman Bath, by the publication of "*Strictures on the personal cleanliness of the English, with a description of the Hammâms of the Turks, and an attempt to show their conformity with the Bath of the Ancient Romans,*" but he failed, like all who preceded him, to penetrate the contented apathy that enshrouded the profession. Dr. Armstrong, of London, ventured to test Dr. Gower's Warm-Air Bath in congestive fever, and was so impressed with its value in acting on the system without trouble or inconvenience, and without any risk of yet further exhausting the patient, that in his public lectures he strongly recommended its use to the profession. He said :—

> "The whole surface (of the patient) is chilly; the blood has retreated from the surface, and has been accumulated in some internal organ, where it undergoes almost a complete stagnation, or at least produces a complete interruption of the venous circulation. A derangement of the functions of that part is the result, and if the part be important, of the functions of the whole body. The use of the Hot-Air Bath is *to rouse the energies of the system, and* in some of these cases *the patient is raised, as by the touch of a magic wand, from weakness* to strength by its application."—*Lancet*, vol. v., p. 74.

But Dr. Armstrong was allowed to waste his humane advice on the desert air. At that time the murderous exhaustive system of blood-letting, blistering, purging, and violent drugging, was in full play in cases of congestion, and what matter though thousands were annually consigned to premature graves, so long as their sacrifice was effected in accordance with "legitimate practice," and they were slaughtered ***secundum artem.*** Rational and scientific minds like Dr. Armstrong would receive no audience, and their recommendations of simple natural agents were ridiculed and despised. Another generation had to die out before any one was found among the profession with a mind sufficiently enlightened to appreciate aright the incomparable merits of hot air, and at the same time gifted with the requisite spirit to brave the obloquy certain to be incurred in placing those merits practically before the British people, by the establishment of a Bath. We now possess this "great boon to humanity," and it is only just and fitting that the story of its revival and successful establishment in our day should be truthfully told.

Among the very few members of the medical profession who had their attention early excited by the fame of the "water cure" practice revived by Priessnitz, and considered it a duty to investigate its merits, was Dr. Barter, who enjoyed extensive practice in charge of a dispensary district in the South of Ireland. Having studied the subject carefully, he became convinced that the principles of Hydropathy were entirely consistent with nature, and embodied great therapeutic truths, the value of which scientific experience could alone unfold. Confirmed in his views, and further encouraged by the signal success that attended their partial application, whenever a fitting opportunity offered in his private practice, he resolved to open an institution where they could be fully and fairly applied in the systematic treatment of disease. Accordingly, in the year 1843, he opened his Hydropathic establishment at St. Anne's Hill, a most favourable locality, about eight miles from the City of Cork, and it had the distinction of being the first of the kind established in Ireland.

For a period exceeding thirteen years, Dr. Barter diligently applied himself to the development of the Hydropathic system —directing his attention more particularly to the investigation of the sanative influences of *temperature* in the treatment of disease. He was thus led to introduce the use of *vapour* as a curative adjuvant in addition to the usual appliances of Hydropathy, and the results were highly satisfactory. The *vapour-box* was first employed, by means of which a higher temperature than was otherwise attainable could be easily applied locally to the part affected. The benefits resulting from this partial use of vapour led to the subsequent introduction of the *vapour chamber*, or what was known as the "Russian Bath," and very decided advantages were found, in many forms of disease, to follow its skilful application.

While, however, Dr. Barter was thus engaged in investigating the remedial properties of temperature, he received, instead of sympathy and aid, enmity and opposition from the medical profession. Even some fellow-practitioners who had been enlightened enough to adopt the principles and practice of Hydropathy, ridiculed his establishment at St. Anne's as the "vapour institution"—rashly and ignorantly despising a great therapeutic agency which they had not inquired into, and did not understand. But, subsequently, they had reason to change their opinions, and adopt the use of vapour-heat in their own Hydropathic practice.

It was thus that Dr. Barter's experience of the beneficial effects of vapour, in the treatment of disease, led him to the conclusion that inestimable advantages were to be obtained from the judicious employment of *regulated temperature*, as a remedial agency in many abnormal conditions of body; therefore, when his attention was first directed to the Bath as a Turkish institution, his mind was fully prepared to comprehend and value its incomparable properties. He immediately perceived how, by its means, he would at once possess unlimited control over far higher ranges of temperature than the use of mere vapour could possibly place at his command. Hence the adoption of the Bath by him was, after all, only a natural gradation in that course of progressive improvement on which he had entered some thirteen years previously, and which his experience had led him to value and follow.

We have seen how, for a period of more than two hundred years, numerous travellers had published works in England descriptive of the Baths in use among the Russians, Fins, Turks, Egyptians, Persians, and other peoples, at the same time testifying to their marvellous efficacy in the alleviation and cure of many bodily disorders. We have also seen how some scientific inquirers had come to appreciate the advantages of heat as a powerful therapeutic, and with commendable earnestness advocated the revival of the Roman Bath, though all their efforts were of no avail. The teachings of science and experience were alike disregarded—the good seed fell upon barren soil. The medical mind and its learned educators and directors evinced no desire to escape from the profitless routine of Drug experimentalism, which had fettered reason and depraved practice for centuries, but among the intelligent public a decided change was slowly in progress, gradually undermining credulous faith in the theories and practices of Drug Medication, and consequently disposing reasoning minds to receive instruction in the School of Nature.

Three causes principally conspired to facilitate this desirable change. *First*, the more general diffusion of knowledge which became a distinguishing feature of our century some forty years ago, creating and fostering a free spirit of inquiry that imperceptibly penetrated the accumulated incrustations of ignorance, prejudice, and traditional teaching, thereby rendering the notorious imperfections of medical systems the more observable. *Second,* the ardour with which the disciples of Homœopathy propounded their doctrines which, reduced to practice, were a decisive protest against the "fearful polypharmacy" of Old Medicine, while its negation of action, leaving disease largely to Nature, contrasted most favourably with the fatal consequences that usually followed the "heroic remedies" of Drug Practitioners. *Third,* the great increase in Hydropathic institutions throughout the United Kingdom, consequent upon the adoption of the rational principles of Hydropathic practice by many enlightened and eminent physicians. The thousands that flocked annually to such establishments, and experienced relief from the application of simple and natural means after all the delusive resources of mere Physic had failed, contributed greatly to diffuse through society sound practical views concerning the philosophic and natural treatment of disease.

These causes combined to awaken intelligence to the fatal fallacies and deadly practices of Drug Systems. A new light was reflected on the public mind. A growing distrust was excited against the presumptuous arrogance and supercilious flippancy of School dogmatism, while a disposition was encouraged to repose a reasoning confidence in the logic of well-attested facts, rather than in the conjectural crudities and deceptive sophistries of speculative Physic.

Such were the influences operating in Society when, early in 1856, Dr. Barter chanced to meet with a work entitled *The Pillars of Hercules,* which had been published by Mr. David Urquhart eight years before. In it he described the Bath as used by the Turks and Moors, highly commending it as a sanitary and sanative institution. On reading this description the conviction of the transcendent importance of the Bath instantly flashed on Dr. Barter's mind. "I was electrified," he said, "and resolved, if possible, to add that institution to my establishment." He wrote to Mr. Urquhart expressing his feelings on the subject, and said—"If you will come down here and superintend the erection of one, men, money, and materials shall be at your disposal." Mr. Urquhart accepted the invitation, and the foundation of the first Hot-Air Bath, popularly known as the "Roman," or "Turkish," erected in the United Kingdom, or, indeed, in modern Europe, was laid at St. Anne's Hill, Cork, on the 7th of June, 1856. In addressing the company assembled on the occasion, Mr. Urquhart said:—

> "For nearly twenty years he had been labouring to get some one to carry out that system of Baths which was at once a mark of civilization and enlightenment among Eastern nations, and which constituted the chief luxury of the Oriental world, which had proved the most precious preservative of health, and one of the greatest embellishments of society—that which Dr. Barter had shown them, not by any words or theories, but by practical effects he (Mr. U.) had endeavoured, for nearly twenty years, to prove that the balnia of the Greeks, the thermal of the Romans, and the hamam of the Arabs would be a lasting benefit to this country; and he laboured in vain to get some person of eminence in society, and qualified to exercise an influence over the minds of men, to carry out his views. His exertions *had not the shadow of success* until he received from Dr. Barter an intimation stating, that if he (Mr. U.) came down to St. Anne's Hill, he would place land, workmen, and materials at his disposal. . . He augured for Dr. Barter not merely success in his enterprise, but that fame and reputation which those, who deserved well of the community, would in the long run obtain, and which they would not obtain the less because they were beset with obloquy and reproach for a time, and because they had passed through 'the winter of discontent.'"

Mr. Urquhart is entitled to credit for having, during his visit to the East, learned to appreciate the virtues of the Bath, and for having so earnestly commended it to public attention; but, as he admits, all his efforts to have it introduced in Britain, like those of the many able writers who preceded him, received no favour or support from the profession or the public, and had no prospect whatever of being successful until Dr. Barter took the matter in hand. His professional knowledge and extensive experience, which unfolded to him the inestimable importance of temperature as a therapeutic agent, admirably qualified him to become the introducer and establisher of The Bath, while he possessed a spirit of perseverance that ridicule could not damp, nor obloquy discourage.

And it was well so, for no sooner was the Bath in operation than medical opposition was directed against it with the same ignorance, prejudice, and malignancy that had been heaped upon every beneficial innovation on the established routine since the days of Hippocrates. Very disgraceful attempts were made by medical men to alarm the susceptible fears of patients, and prejudice them against visiting St. Anne's. The Bath was represented as a most dangerous novelty by those who were totally ignorant of its history, its properties, and its action. At first this had considerable effect, and the number of resident patients quickly dwindled from an average of 50 to below 20, and on a friend remonstrating with Dr. Barter against "the imprudence of risking his well-earned reputation by introducing so great a novelty," his reply was—"The Bath is a further development of the principles on which Hydropathy is founded. *It is the keystone of the arch.* If every soul leaves my establishment, I shall still persevere. *The Bath is founded on truth, and must eventually succeed.*" Animated by such a laudable spirit he did persevere, and he did succeed.

It was scarcely to be expected that the first Bath, erected at St. Anne's, under Mr. Urquhart's superintendence, should have been faultless. It was not constructed after the ancient Roman model of the period when the Bath flourished in its perfection, but rather after the slovenly and imperfect modern imitations with which Mr. Urquhart was then most familiar; consequently, many of the details Dr. Barter found by experience were exceedingly objectionable. He was thus led to examine the ancient models, and to study the effects of temperature on the body when the atmosphere of the Bath was surcharged with *vapour*, and when it was comparatively *dry* and perfectly *pure*, though heated to higher degrees of temperature.

His inquiries in this direction were rewarded by discovering the incomparable properties of the Hot-Air Bath as a curative agent, and he forthwith had new Baths erected, in the construction of which he combined such improvements as were consistent with ancient practice, and his own matured experience justified him in considering beneficial. He is thus fairly entitled to a far higher degree of merit than would attach to him merely as the acknowledged reviver of the Roman Bath in its integrity and purity—invaluable though it be in preventing disease and preserving health. *He was the first also to practically test its superlative merits as a curative agent*, and demonstrate to the profession that its action was in accordance with the laws of physiology.

The Greeks and Romans valued the Bath mainly as a luxury. The Turks, who preserved it, with the Russians, Fins, Persians, Moors, and others only had, at best, but a dim sort of knowledge respecting its virtues as a prophylactic, while they knew little or nothing about its unequalled merits as a therapeutic. The American Indians, Mexicans, and native Irish, as we have seen, employed their rude forms of Bath for curative purposes. But to Dr. Barter alone justly belongs the fame of having been the first to test and make known to our age the potent therapeutic properties of the pure Roman Bath, and by so doing the Orientals themselves have been instructed to appreciate more fully and more truly its undoubted sanative virtues. Dr. Sheppard, in his excellent treaties on *Bathing*, observes:—

> "It is curious that the application of caloric to the human system, by means of the Hot-Air Bath, was used neither by the Romans nor the Turks as an agency *in the treatment of disease*. It was simply a luxury, felt to be a necessity of being, and so universally resorted to that sickness was comparatively unknown. If its effect was, in any sense, curative, that effect was produced unconsciously." Page 15.

In the *Manual of the Turkish Bath*, edited by Sir John Fife, M.D., he admits that the Turks first learned from the scientific treatment so happily inaugurated by Dr. Barter, to appreciate aright the therapeutic merits of Hot-air relieved from the oppressive influences of insalubrious vapour which arose from their careless and sloppy manner of administering the Bath. "For the *first time now*," he says, "the Bath is dealt with in Turkey as a medical agent." In reprinting, in 1856, the chapters on the Bath from his *Pillars of Hercules*, after Dr. Barter had brought his knowledge and experience to bear on the consideration of the proper atmosphere for the Bath, Mr. Urquhart confessed that, having regard to sanative influences, he had but most imperfectly apprehended the essential difference between *vapour* and *hot-air*. In a *Postscript* which he added to those chapters he said:—

> "The foregoing was written ten years ago; the part on the Turkish Bath still ten years earlier. I do not venture on correction, as *little of what is here might otherwise remain;* but I cannot suffer this reprint without stating that I had *then but most imperfectly apprehended the value of Hot Air*, to which, as distinguished from *vapour*, the Turkish Bath owes its peculiar excellence."

Time and experience, which test all things, have unquestionably proved that in substituting pure Hot-Air as the most salubrious atmosphere for the Bath, in preference to impure visible vapour arising from the soapy washings of the numerous bathers, Dr. Barter was guided by a sound physiology, and adopted the only course by which the sterling merits of the Bath could be fairly developed.

Some medical practitioners, indeed, of reputed character and standing, without having any personal acquaintance with the subject, rashly exposed their own ignorance by expressing opinions condemnatory of the improvements introduced by Dr. Barter. They foolishly confounded the action of dry arid air, without any humidity whatever, with that of the pure atmosphere of the Bath, which retains sufficient natural moisture for all healthful purposes, though its presence is not manifested in the noxious form of *visible vapour* impregnated with offensive exhalations. Yet the absence of such vapour was advanced as one of the many ridiculous pretexts by which professional prejudice and jealousy sought to justify an ignorant and ungenerous opposition to an institution destined to become a blessing to humanity.

After the Bath had been in operation for some time at St. Anne's, and its remedial virtues had been demonstrated by experience, injudicious friends counselled Dr. Barter to "keep the goose that laid the golden eggs to himself," and not excite the opposition of the medical fraternity, by attempting to effect a general revolution in the treatment of disease, such as would necessarily follow, should the public become convinced of its marvellous curative and alleviative properties. But such selfish counsel was wisely rejected, and, in the true spirit of his honourable profession, Dr. Barter resolved to make the virtues of the Bath known, that all might profit by them. With this view he freely expended both time and money. The results of his experience were detailed in public lectures, delivered in various parts of Ireland and England, while he disinterestedly invited his medical brethren to investigate and test those results —freely offering them all the facilities at his command for so doing. But this generous conduct did not disarm hostility, neither did a similar honourable course in the case of Jenner, and of many others. The Bath, no matter what its merits might be, no matter how great the boon it offered to mankind, was necessarily revolutionary in practice. It pandered to no medical delusions, and was wholly antagonistic to all drug deceptions; therefore, reason and experience should be set aside, and every discouragement offered to its beneficent progress.

But the Bath was the consummation of Hydropathic truth, and was not to be suppressed by the machinations of ignorant and prejudiced detractors. It commended itself to the common sense of enlightened laymen who had learned to distrust the pretentious empiricism of physic, while the unseemly manifestations of medical enmity only served to provoke discussion, and make its sterling merits better known. Many members of the profession, who were gifted with minds superior to its petty jealousies and trading propensities, inquired for themselves, and ended by adopting the Bath as a great therapeutic power.

The first Bath erected outside his own establishment was built by Dr. Barter's assistance for the poor in the city of Cork;

and now there are no less than *fourteen* Public Baths in the county and city in full operation, while in the mansions of nearly all the nobility and gentry private Baths have been constructed. Baths have also been established, principally by his personal exertions and pecuniary assistance, in several towns in Ireland, viz., Dublin, Bray, Waterford, Limerick, Killarney, Sligo, Belfast; besides, others have been opened by public companies and private individuals.

In England, also, very gratifying progress has been made, though the advance has not been creditable in comparison with the wealth, liberality, and reasoning intelligence of its people. In 1858, Dr. Barter visited England, and delivered some lectures, which excited considerable attention. The first public Bath was established at Bradford, and several enlightened professional gentlemen, among whom may be mentioned Dr. Brereton, Sir John Fife, M.D., Dr. Wollaston, and Dr. Haughton, came forward and avowed their belief in its great remedial properties, which led to other establishments being opened in various places.

On visiting London, and inspecting some of the Baths erected there, Dr. Barter was so struck with their imperfections in many respects, that he forthwith got up a Company, and constructed a magnificent model Bath in Great Victoria Street, at the cost of £28,000, but it has been recently purchased by a railway company, under the authority of Parliament. A very excellent Bath, but on a far smaller scale, was subsequently established by Mr. Urquhart, in Jerymn Street, who adopted the improvement of pure Hot Air, introduced by Dr. Barter, as distinguished from visible vapour, and now there are numerous public and private Baths in every quarter of London—all constructed more or less faithfully after the same improved principle.

Indeed, it may be observed, that all properly-constructed Baths are now so regulated as to command *atmospheric purity* as a prime necessity—the possession of which is still further facilitated by abandoning the ancient Greek *hypocaust*, or heating by flues beneath the floor, and substituting an improved and more economic mode of heating from the sides, with provision for ensuring a supply of direct or radiated heat. An excellent new public Bath has been recently constructed in Cork on this plan, by Dr. Barter, and it has been found to answer so admirably, that he contemplates introducing the change into all his Baths.

On the Continent the introduction of the Bath was received with decided popularity and success. In parts of Germany it is announced as the "Irish Bath." But more especially in the United States of America has its progress been signally rapid and prosperous. This may be accounted for by the fact, that new communities are generally inspired by a keener practical intelligence than pervades the population of older states. Customs and prejudices "grow with the growth, and strengthen with the strength," of national institutions, and even when detrimental to national well-being are exceedingly difficult to change or uproot, whereas utility alone is the prevailing rule of thought and action in new countries.

Hence it is that the Hydropathic system, of which the Bath is the crowning perfection, has not found in Great Britain the universal acceptance that might have been expected from its approved utility and rationality. The inveteracy of ancient habits and prejudices on the subject of Drugging cannot be easily or suddenly overcome. A generation educated in traditional Physic superstitions cannot rapidly be made to unlearn even exploded fallacies, and imbibe healthful truths. Thus it is that the pernicious habit of Drugging has become something like a confirmed custom among the population of the kingdom. Rich and poor, high and low, are alike the victims of this fatal folly. No other country yields such abundant and luxurious harvests to the quacks and knaves of medicine. The fashionable physician trades as empirically, only in a more accomplished and less offensive manner, as his humble rival, who extols the infallable merits of his elixirs, catholicons, hygienic pills, and patent quackeries. The difference between them is only in degree. There is the same absence of conscientiousness in both. They both appeal to the same weaknesses of human nature, both pander to the infirmities, credulities and morbid appetites of their dupes, and both appear alike reckless of human life, while Death impartially crowns with a funereal wreath the practice of both. But—

> " Time's glory is
> " To unmask falsehood, and bring Truth to light."

To time, therefore, must be left the testing of false systems of Physic, as of everything else, and the diffusion of those great Hygienic truths which are destined to make the profession of Scientific Medicine a substantial blessing to mankind. Nor is there any reason for despondency, for when it is considered that twelve years have scarcely elapsed since the first Bath was established at St. Anne's, and how unscrupulous and persistent the opposition has been, the progress already made has certainly been both rapid and cheering.

## CHAPTER V.

*The Physiology of Life—Its Departments, the Mechanical, Intellectual, and Nutritive—Primary Importance of Healthy Nutrition.*

BEFORE the reader is in a position to appreciate aright the invaluable properties of the Hot-Air Bath, it is necessary to possess a general idea of the constitution of the human body, inasmuch as the action of the Bath in preserving health, preventing disease, and, as a curative agent, is based on the unerring laws of our physiological being. At first sight to acquire this knowledge might appear a matter of tedious study, but practically it is not so. Human physiology, to be sure, presents an almost boundless field for scientific inquiry—a vast extent of which has not yet been successfully explored or cultivated. Yet, for all practical purposes of individual health, there is no mystery about the well-ascertained outlines—the great established principles and guides, which, divested of technical phraseology, can be sufficiently understood by the general public, while that they should be thoroughly understood and implicitly followed is of vital importance to the well-being of mankind.

Physiologically speaking, man is composed of certain substances known as solids and fluids—the latter largely predominating. The *Solids* are the bones, tissues, &c., which make up the mere mechanical organism—the human machine or framework. The *Fluids* are what afford a constant supply of nutriment to keep that mechanism in motion—to nourish its growth and development. The fluids act through organs which present a complicated combination of parts, each having functions peculiar to itself to perform, but all wondrously designed to work congruously together in maintaining the perfection of the whole.

Physiological Life is the product of the concurring and harmonious action of this grand organism to one sublime end—the preservation of the individual and of the species. This action is produced and maintained by the chemical changes which the solids and fluids of the body are incessantly undergoing in their relation to each other:—

> "Every structure in the living body is continually and simultaneously undergoing the processes of composition and decomposition—of renovation and decay. Particle by particle of new matter is constantly added to every structure, from the fluid blood, and, at the same time, particle by particle of old matter is constantly absorbed from every structure, and converted to the fluid lymph. So that, while the organic constitution and physiological identity of every structure and of the whole system remain permanent through life, a continual change is taking place in the particles of matter of which our bodies is composed; and, according to the estimate of some physiologists, an entire change of all the matter in our bodies is completed as often as once in seven years."—*Graham's Science of Human Life*, par. 503.

Hence the internal organism of man has been represented as "an active laboratory, in which a number of instruments are constantly transforming into their own substances nutritive particles," by means of which vitality is sustained. Thus, popularly speaking, there is a perpetual pulling down and building up going on in the human system—a continued chemical change in the organism by which the functions of animal life are performed, and this process of incessant change in the elementary substances of which the body is composed constitutes all we know, or are ever likely to know, of what is strictly and properly termed organic life. But it will be observed that while organic life necessarily implies continuous changes, yet all these changes are as necessarily dependent on the external supply of nutriment to the system—as meat and drink, air and sleep, which are alone absolutely required to maintain man as regards *his mere animal existence.*

It is obvious, however, from the possession of intellect, with which man has been so divinely gifted, that he was never intended to live as a mere animal, but has been mysteriously designed by the Great Architect for a nobler purpose and a higher sphere. Yet marvellous as his mechanism is, as "the paragon of animals"—sublime as are his intellectual endowments, "noble in reason, infinite in faculties," still his whole being is entirely dependent on *animal nutrition.* Thus, in strict accordance with physiological analysis, what is commonly called Life is devisable into three great and distinctive departments—the *Mechanical,* as appertaining to organism such as any mere machine may possess; *Intellectual,* as involving the possession of a godlike intelligence which no mere machine ever did or could exhibit; and *Nutritive,* by means of which sustenance is supplied to the whole man, and upon which consequently, the existence of Mechanical and Intellectual Life is necessarily entirely dependent. Hence the all-important conclusion is arrived at, that the whole well-being of man as a living organism is primarily based on the possession of *healthy Nutritive functions.*

While, however, these three great departments—the Mechanical, Intellectual, and Nutritive—working together with a concurrent harmony maintain healthy Life, yet they are each governed by separate laws, and subjected to special influences, and have two-fold functions to perform. First, as regards their own healthy sustentation; and, second, with respect to their duties to, and bearings on, the whole economy. These relations of the parts to themselves and to the whole economy, have been so clearly ascertained and defined that they are called *laws,* or *principles,* and are immutable, that is, they cannot be violated with impunity—without consequent injury, in a greater or lesser degree, to the parts themselves and to the entire system.

Thus it is a demonstration, that perfect Life can only be maintained by living in faithful obedience to the Divine Laws of our organism. All that is designed by Providence is perfect—admits of no improvement. Whatever deviates from that design—whatever interferes with or impedes the independent functions of the parts that in combination constitute the perfection of the whole, must necessarily exercise a disturbing influence, and result in derangements, partial or general, affecting the whole organism. Hence, as what we call *Health* is the perfection of our being as designed by Providence, so any derangement or disorganisation of that design, no matter how produced, we designate by the general term *Disease*.

It is also to be observed, that in creating such a wonderful organism as Man, and endowing it with a living intelligent principle, Providence did not leave its maintenance to chance, but conferred on it a natural tendency to maintain itself in perfect action for the allotted period on earth—an inherent power to resist extraneous influences calculated to impair its vitality, and to correct functional derangements from whatever cause arising. This great restorative tendency, principle, or property inherent in Man is called the *vis medicatrix naturæ*, the healing or curative power of nature, and it is always operative, in a greater or lesser degree, to repel or repair destructive derangements.* But its power is mainly dependent on the sound and vigorous condition of the animal economy—on its *Health*, which can only exist in perfection so long as the Nutritive functions perform their duties with completeness.

Therefore, it will be understood, that the healthy existence of Man is entirely dependent on the perfection of his animal—his Nutritive Life. If we overwork the brain, or overtax physical strength, the first protest uttered by Nature will be through the Nutritive functions. This is so because there is action and re-action continuously going on between the Mechanical, Intellectual, and Nutritive departments of our organism—a vital sympathy the one with the other as essential parts of a grand design, which renders it impossible to outrage the laws of any one without affecting the whole. This is a great Physiological truth which every man should know—it lies at the root of healthy existence, which is the greatest blessing man can enjoy in this world, and it is the only basis on which can rest any rational system of Hygiene—yet it is a truth that the vast majority of mankind in civilized life habitually ignore.

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* It may be as well to observe here that the phrase *vis medicatrix naturæ* is generally used as synonymous with such phrases as "vitality," "vital principle or power," or "conservative or preservative principle," "vital force," &c. These all have in the language of Physiology *one and the same meaning*. They all refer to the principle of life with which the Creator animated our mechanical organism, and by which it is kept in being, and is enabled to perform its functions. This is strictly and scientifically *Physiological Life* which ought never to be confounded with what is *theologically* implied by the "*Soul* of Man."

We must further consider that the Nutritive functions are designed to repair the chemical waste of the body—to nourish the internal organism, so that the springs of life may be maintained in healthy action—to promote, with this view, secretion, absorption, circulation, and respiration, by means of which the system is sustained. But, while performing those all-important functions, Nutrition is itself subject to certain fixed laws, and, to be healthful, those laws must be obeyed. Thus, it is a law of Nature, that man must *eat to live*, but if, as is too often the case, we find men more inclined to *live to eat*, making the indulgence of unnatural appetites a primary consideration of their lives, how can they hope to escape the tortures and miseries of disease, certain to result from over-taxed and impaired Nutritive action? Nature's laws are too seldom faithfully observed, hence life is too often a painful struggle carried on, with more or less intensity, between the providential tendency of our organism, the *vis medicatrix naturæ*, to maintain itself in a sound normal condition, and the disturbing influences caused by excessive taxation of the Nutritive functions. As Dr. Edward Johnson observes:—

> "The most ample and unquestionable experience has proved that whenever any of the conditions of life and health are imperfectly or improperly fulfilled; that is, when we eat too much or too little—whenever we eat unwholesome food, drink unwholesome drinks, breathe impure air, take too little or excessive exercise, whether of the limbs or of the brain; too much or too little sleep, &c., the mode in which these causes operate on us to our detriment, is by the manner in which they operate on certain

of those vital actions which collectively constitute Life. . . . Any imperfect or improper fulfilment of any of the conditions of life and health directly produces, as the most ample experience proves, a corresponding imperfect or improper performance of some one or more of the Nutritive actions."—*Practice of Hydropathy*, p. 58.

This is unquestionable truth, but unfortunately the necessities of man's existence—the conditions of his gregarious instincts—the developments of his higher life, and the allurements of social intercourse, render it almost impossible that he can so habitually govern and control his appetites, passions, and avocations as to maintain his Nutritive functions in perfectly healthy action. Habits are formed, and modes of life followed, more or less in antagonism to Nature's laws, and hence results an inevitable tendency to abbreviate the natural term of life." "One only in a thousand," it has been remarked, "reach 70 years of age, although 100 years is the full term of natural life," and this, excluding accidents, can only be attributable to the non-observance of the laws of our being.

Considering, therefore, how entirely man's well-being is dependent on healthy Nutrition, it becomes of vital moment that every one who desires to live in obedience to Nature's laws, should possess a general knowledge of the manner in which the Nutritive process is conducted. There is an amount of Physiological knowledge which all educated minds ought to possess, and that amount is easily acquired without the encumberment of complex details, which are more properly within the province of professional study. Besides, as our primary object is to explain the action of the Hot-air Bath as a sanitary and sanative agent, it would be impossible to understand that action without possessing a general idea of the process by which Nutritive Life is sustained, because it is more especially upon the Nutritive organism that the peculiar properties of the Bath beneficially act. This we shall now endeavour to explain, without departing from the simplicity which is so essential in popular exposition.

## CHAPTER VI.

*Nutrition—The Blood: its Circulation the main source of Nutrition—Its impurity a source of Disease—The Excretory Organs: action of Bath thereon.*

Physiologists are unanimous in teaching that the means by which Nutrition is conveyed to all parts of the human system is through the agency of the Blood. All the elements which contribute to the growth and development, the sustentation and renovation of the human organism—which, in fact, maintain Mechanical and Intellectual and Nutritive Life—are contained in the Blood, and are supplied to the economy by means of its circulation. But the Blood itself is primarily dependent for those elements on the food we eat and on the air we inspire. Food and air are the fundamentals out of which pure blood is chemically formed, and the process may be generally described as follows:—

Food is taken into the mouth to undergo the process of mastication. The act of masticating excites the salivary glands, and they emit secretions to mingle with the food and facilitate the process of mastication, by which, as every one knows, the food is reduced to a pulpy substance—the more pulpy the better. We would here request the reader's attention to a most important law, which rules throughout our whole physiological being—that according to the perfect performance of the functions allotted to *each part* of the human organism, so is the healthy existence of the whole. Therefore, if the masticatory process is not perfectly performed as Nature designed it to be—having provided special apparatus for the purpose—if food is hastily bolted, and man feeds like a boa-constrictor, an undue and unnatural amount of labour is thrown upon other organs, and consequent derangement, of a more or less serious character, must inevitably be produced. This is an immutable law of our organism—it affects every part, every function that each part has to perform, and on the perfect action of all the parts the healthy existence of the whole depends.

From the mouth the masticated food is propelled, by a peculiar muscular action, down the œsophagus and conveyed into the stomach, where it is subjected to what is ordinarily termed the digestive process. This is effected by the chemical action of the *digestive fluids* which are secreted for the purpose. They act on the food, in combination with the higher temperature of the stomach, and a contractile motion it possesses, by means of which the food and the fluids are mixed together, and kept in a state of constant agitation until the soluble portions are dissolved and become *chyme.* It then passes from the stomach into the intestines, in which it is exposed to the action of bile secreted by the liver, and also to several other secretions, the effect of which is a still further chemical change, separating the contents into two portions—the Nutritious, or *chyle,* and the excrementitious. The nutritious portion is then taken up by the absorbent vessels; and in its further progress through them, it is subject to additional changes by which it is prepared for *Assimilation* —that is, its properties are changed and its *Vitalization* commences, so as to fit it to assimilate with and nourish the living organism.

It is from the *chyle* thus produced, acted on, and gathered together in the absorbents, that pure blood is ultimately formed. But, before tracing the process further, it is necessary to understand that the heart is divided into two great sides or chambers, distinguished as the right and left. These chambers have no direct communication the one with the other, but are separated by an impervious muscular partition. Each chamber is divided into two sub-compartments, which communicate by means of valves, and these compartments are respectively named from their position the right and left *auricles* and *ventricles.* The auricles form the upper compartments of each chamber, the ventricles the lower, and the communicating valves always open from the auricles into the ventricles—never otherwise. These valves are opened and closed by the contraction and expansion of the heart, which is popularly known as its *beating*. The *arterial* or pure blood always flows into the left auricle, and the *venous* or impure blood into the right, and thence, in each case, into the corresponding ventricles. From the left ventricle proceeds a main artery, the *aorta*, and from the right ventricle another main artery, the *pulmonary*, the vital uses of which will soon be apparent.

Now, to return to the *chyle*, or the Nutritious product of the masticated food, which, after undergoing various chemical changes, has been collected by the absorbent vessels. In its passage through the absorbents it is further purified and vitalised, and ultimately conveyed to the right chamber of the heart, into the auricle, or upper compartment of which it flows, and mingles with the venous or impure blood therein contained. By the contraction of the heart the right auricle is compressed together, the valve communicating with the lower compartment or ventricle opens, and the blood is propelled into it. The valve then closes, and the blood is expelled from the ventricle into the pulmonary artery by which alone it can escape. Through this artery the blood is carried directly to the lungs for the purpose of undergoing the final process of purification, until which time it is not fitted to afford and convey vital nourishment to the system.

The lungs are spungy textures which occupy both sides of the chest, and are separated from each other by the heart and its appendages which lie between them. The right lung is divided into three lobes, the left into two, and these again into numerous lobules, or smaller lobes. With a view to convey a popular idea of the pulmonary organism which is truly wonderful, we may, as an illustration, compare the lungs to two bunches of grapes, the stems of which we may designate the bronchial tubes. These tubes, which proceed from the windpipe as it enters the cavity of the chest, branch off into minute subdivisions like the branches of a tree, or as the offshoots from the main stem of a bunch of grapes, until they eventually expand into a cluster of air-cells at the termination of each minute bronchial tube.

These terminal clusters of air-cells may be compared to the the individual grapes on the bunch, and each cluster consists of some 17,790 air-cells, as calculated by M. Rochoux, varying in measurement from the 1-200th to the 1-70th of an inch according to Weber. The walls of these air-cells are formed of an exquisitely delicate transparent membrane, so admirably designed that the capillary vessels with the impure blood freely circulate between and around them, and thus are enabled to receive the full influence of the pure air at each respiration. It is marvellous to consider that the number of air-cells in the lungs amounts to not less than *six hundred millions.*—Carpenter's *Human Physiology*, third edition, par. 758.

It is by this vast, intricate, and delicate organism that the vital functions of *Inspiration* and *Expiration* are performed. By muscular action the chest is expanded, atmospheric air is *inspired*, and dilates the lungs by circulating through their air-passages and their six hundred millions of air-cells. The counter-action takes place with the contraction of the chest, when the foul air from the lungs is *expired*. This alternate process is unceasingly going on, and is, we need not say, essential to blood purification, and consequently to life.

From this rough sketch of the structure and functions of the lungs, the reader will be enabled to comprehend how the purification of the blood is effected. We have seen how the impure blood is expelled from the right ventricle of the heart into the great pulmonary artery, which, as it approaches the root of the lungs, throws out several branches, these again throw out numerous sub-divisions, which are again ramified into an innumerable quantity of exquisitely slender vessels called capillaries, and these spread over the whole surface of the lungs and through the interstices of their lobules. The impure blood circulating through this wonderfully minute network of capillaries is thereby exposed to the purifying influence of the atmospheric air which is inhaled into the six hundred millions of air-cells at each inspiration. This contact with the air causes the blood to excrete or throw off its impurities—chiefly its superfluous carbonic acid—which is a poisonous impurity, and to absorb in lieu thereof an adequate amount of oxygen, which is essential to its vital purity. When this lung circulation has been completed, the purified blood is collected by a system of vessels on the left side, analogous to those by which it entered on the right, and these vessels uniting together form one main trunk, which conveys it to the left auricle of the heart as pure arterial blood.

This *Lung circulation* is a process that takes place solely for the purification of the blood, and is totally distinct from what is denominated the "circulation of the blood," as demonstrated by Harvey. Purified and enriched in the Lungs, the blood passes, as we have stated, into the left auricle of the heart, and it is this pure arterial blood that nourishes and renovates the entire living organism, which is incessantly by its action undergoing decay. What then is properly meant by the circulation of the blood is its flow from the left side of the heart through the whole vast circulatory system in this way—

The left auricle of the heart contracts, and the pure blood is sent through the open valve into the lower compartment or ventricle. The valve then closes, and the blood is propelled through its only possible means of exit into a great artery, the *aorta.* This action is maintained by the alternate contraction and expansion of the heart—its *beats.* The aorta throws off numerous branches of various sizes, through which the blood flows, until the branches become gradually diffused into an innumerable number of minute hair-like vessels called the *capillary* tubes, by means of which it is carried to the minutest parts of the tissues—in fact, permeates every portion of the body, thus supplying the elements of life, and feeding unceasingly with nourishment the whole animated organism. So extensive and minute are the ramifications of these capillaries by which this part of the circulation is conducted, that the point of the finest needle could not be inserted in any tissue of the body without puncturing one or more of them!

After having flowed through these capillaries, depositing nutritive material, the blood is again collected by a corresponding system of larger vessels, called the *veins*, into which the capillaries concentrate, and the smaller veins then uniting form two great trunks which convey the blood, with all the impurities it has gathered in its course, into the auricle of the right chamber of the heart, whence it is propelled into the circulatory system of the Lungs for purification as already described, and thence into the left auricle of the heart as pure blood, again to enter upon its vivifying course. This is what is meant by the "circulation of the blood," properly so-called, and the mechanism by which it is effected is the most beautifully adapted and marvellously perfect that could possibly be imagined.

Now this circulation of the Blood is a great means to a vital end, and is dependent on fixed laws, the fulfilment of which are essential to perfect Nutrition. Thus the Blood, in its purity, is not a simple, but a very compound fluid, containing and consisting of various ingredients in well-ascertained healthy proportions. The total weight of blood in the body of a healthy man of average size may be estimated at 30 lbs., every 1,000 parts of which contains :—

| | | |
|---|---|---|
| Of Water, | ... ... ... | 795 parts. |
| ,, Corpuscles, | ... ... ... | 150 ,, |
| ,, Albumen, | ... ... ... | 40 ,, |
| ,, Salts, | ... ... ... | 8 ,, |
| ,, Fatty matter, | ... ... | 5 ,, |
| ,, Febrine, | ... ... ... | 2 ,, |

To maintain the Blood in a healthy state, the different ingredients must continue to exist in the fixed proportions above indicated. Hence whatever tends to disturb that fixed relationship of the quantities either by an excess or a diminution, or by the introduction of any foreign ingredient, destroys, in so far, the healthy composition of the blood, and consequently impairs, in a greater or lesser degree, its Nutritive properties.

Then the velocity of the circulation is also subjected to fixed laws, influenced to a considerable extent by, or rather acting in conformity with, individual organisms and constitutions. The rapidity of the circulation is certainly astonishing. Each ventricle of the heart is estimated as capable of containing *two ounces* of blood which is ejected at each contraction. "The number of contractions of the Heart in a given time," says Carpenter, "is liable to great variation within the limits of health, from various causes," but from a table which he gives we take the following as an approximation to the average of male pulses at the several ages specified *

| | *Beats per Minute.* |
|---|---|
| Newly-born Infants,... ... ... | 130 to 140 |
| Age of Puberty ... ... | 80 ,, 85 |
| Manhood, ... ... ... | 70 ,, 80 |
| Old Age, .. ... ... | 50 ,, 65 |

If, then, we take the pulsations of the heart in the average of healthy manhood at 75 per minute, and that at each stroke or beat two ounces of blood are ejected into the circulation, we arrive at the conclusion that 150ozs. of pure arterial blood, or 9lbs. 6oz., is propelled through the aorta in a minute. And taking 30lbs. as the quantity of blood in a healthy man of average size, it follows that the whole circuit of the circulation is completed by every drop of blood in the body in less than 2¼ minutes; and as after each circuit the blood undergoes purification in the lungs, we have all the blood in the body purified and circulating afresh about 28 times in an hour!

But even this estimate of the rapidity of the circulation, extraordinary as it may appear, is held by some Physiologists to be far under the truth. In the arteries the blood is calculated to travel at the rate of 12 inches per second, and in the veins at 8 inches, but in passing through the capillaries, from the arteries to the veins, its rate of progress is much slower. However, it is affirmed, as the result of experiment, that the whole circuit of the circulatory system is traversed and completed in half-a-minute! But it is sufficient for our purpose that the rapidity of the circulation should be generally understood, and we shall see what an important bearing this rapidity has, as a remedial agency, in correcting defective Nutritive action, and affording relief in congested states of the organs.

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* The pulse of the adult Female exceeds in frequency the pulse of the adult Male, at the same mean age, by from 10 to 14 beats in a minute.—*Human Physiology*, third edition, par. 727.

The reader will now understand that Pure Blood is the mainspring of Nutritive Life, and that blood impurities, no matter how produced, are either the exciting or predisposing cause of all diseased bodily conditions. He will also understand that every part of the human organism is perpetually undergoing a process of decomposition and decay, and that an appropriation or assimilation of nutritive particles by each part to supply this waste is a necessary condition of Life and Health. The blood is the medium through which this incessant supply of reproductive material is conveyed *to* every part of the system, and it is also the principal channel by means of which the decomposed effete matter is collected and conveyed *from* the system. This function the blood performs by means of *secretions* which it deposits for expulsion through the organs of *excretion*—the skin, lungs, liver, kidneys, and intestines. The *excretions* are thus the products of the decomposition and waste of the organism, and of the excrementitious products of digestion, and their regular elimination from the system is essential to blood purity; for, if not eliminated, they corrupt the blood, poison the whole circulation, and become fruitful sources of disease.

Thus will be understood how intimate and material the relationship is between all the organs of the body, and their mutual dependence, the one upon the other, for the performance of the functions of perfect Life, and the fulfilment of its grand design. The organism working concurrently and harmoniously together is the perfection of Life; and any derangement of the parts—no matter how caused—produces a disturbance and confusion that may result in a multiplicity of ills. As Shakspeare says of degree—

> "Take but degree away, untune that string,
> And, hark, what discord follows! *each thing meets*
> *In mere oppugnancy.*"

So with our organism. Take one link away—impair an organ, derange a function, and discordant action follows to the greater or less injury of the whole.

Now, of all the organs of excretion, by which the poisonous waste matter of the system is eliminated, modern physiologists and pathologists, also, are now inclined to regard the skin as comparatively the most important. There is no other organ co-extensive with it. It possesses secretive, eliminative, absorbent, and respiratory functions in a higher degree of combination and power than any other of the excretory organs. Not only so, but it supplies a ready medium by which the whole internal organism can be reached and acted on. This is an established truth, while equally important and true it is, that no means have yet been discovered at all comparable to the Hot-air Bath for stimulating the functions of the Skin, which our artificial habits of life are constantly endeavouring to derange and impair.

Imperfect skin-action implies disease in some form or other. The inevitable tendency is for the blood to become impure—the circulation irregular—for the digestive powers to act languidly—for the secretions and exudations of the body to be imperfectly performed, and, consequently, for some part of the internal organism to become overloaded or congested—in short, for the Nutritive functions to become completely deranged. Such a condition of body is preliminary to the development of localised *disease*.

The reverse is *Health*, which follows from, and is dependent on, perfect skin-action, while medical art has no contrivance, drug, or compound equal to, or comparable with, the Hot-Air Bath for maintaining the skin in a condition of healthy activity.

We will now proceed to show that the Bath so acts by giving vitality to skin functions, which our ordinary modes of life have a direct tendency to deaden—by promoting healthy secretions and eliminations—by preventing the congestion of internal organs and maintaining the vital fluid, the blood, in a pure normal state, attracting it to the surface there to deposit its poisonous matters for exudation, thence to return with replenished vitality into healthy circulation—in a word, by giving, as nothing else can give, vigour and tone to Nutritive Life through the purity of the blood.

## CHAPTER VII.

### *The Skin—Its structure and uses—Its functions essential to Life.*

THE vital functions of the Skin, in their relation to the animal economy, were formerly greatly underrated, because not properly understood. The investigations, however, of modern physiologists, aided by powerful miscroscopic agency, have clearly revealed its truly wonderful organism, and demonstrated how all-essential its sound and active vitality is to the due performance of the functions of healthy life, and also how it is designed as a medium through which, in cases of disease, the internal organism can be safely reached and acted on.

The Skin, in the popular acceptation of the term, is considered as only *one* simple substance, but in reality what in ordinary language is called the skin, is to the physiologist known as the *epidermis*, the outer, or scarf skin, underneath which lies the *cutis vera*, or true skin. Thus, properly speaking, the skin consists of two layers, the inner layer, and, immeasurably, the more sensitive and delicate being known as the *cutis vera*, the *derma* or true skin, and the outer layer, by which the *cutis* is protected, as the *epidermis* or scarf skin. Between these two layers, or strata, there is a soft granular or cellular substance called the *rete mucosum*, which contains the particles that give colour to the skin.

Some physiologists hold that the matter which gives colour to the skin is situated in the *rete mucosum*, while others are of opinion that it lies in the inner or flocculent surface of the *epidermis*. According to Dr. Beddoes, chlorine gas will extract the colouring matter from the negro; and Fourcroy verified this experiment, but in a few days the black colour returned again with its former intensity.

"The skin," says Carpenter, is concerned in two great classes of changes; the excretion of various matters from its surface, and from the glandulæ in its substance; and the reception of impressions upon the nerves, with which it is so copiously supplied." Thus the skin performs analagous functions to the lungs, in so far as it takes in and gives out similar matters which are taken in and given out by the lungs, and for this reason it has been described as "the assistant apparatus of the lungs."

In health the skin is the seat of various secretions which seek the surface of the body to be eliminated as excrementitious and deleterious matter from the system. These secretions are collected in small glandular organs which are seated just beneath the *cutis*, or true skin, and are diffused over the whole surface of the body to an extent that is truly marvellous. From these glandular organs innumerable minute tubes, popularly called "the pores of the skin," convey the secretions through the *epidermis*, or outer scarf skin, to be exuded in sensible or insensible perspiration. When nature has destined the pores to perform such an important office, it can be readily understood how essential it is to health that the normal action of the pores should not be obstructed.

This becomes more clearly apparent when we consider the minute organism of the skin, and the marvellous system of *pore* sewerage which nature has provided for the healthy maintenance of human life. Erasmus Wilson, the eminent Anatomist and Physiologist, in his *Practical Treatise on Healthy Skin*, says:—

> "To arrive at something like an estimate of the value of the perspiratory system, in relation to the rest of the organism, I counted the perspiratory *pores* on the palm of the hand, and found 3,528 in a square inch. Now, each of these pores being an aperture of a little tube of about a quarter of an inch long, it follows that in a square inch of skin on the palm of the hand there exists a length of tube equal to 882 inches, or 73½ feet. Surely such an amount of drainage as 73 feet in every square inch of skin, assuming this to be the average for the whole body, is something wonderful, and the thought naturally intrudes itself—*What if this drainage were obstructed?* Could we need a stronger argument for enforcing the necessity of attention to the skin?

> "To obtain an estimate of the length of the tube of the perspiratory system of the whole surface, I think 2,800 might be taken as a fair average of the number of pores in a square inch, and 700, consequently, of the number of inches in length. Now, the number of square inches of surface in a man of ordinary height and bulk is 2,500; the number of pores, therefore, 7,000,000; and the number of inches of perspiratory tube 1,750,000; that is, 145,833 feet, or 48,600 yards, or nearly 28 miles."—Page 43.

Now, the secretions of the human system are constantly going on, and in a normal, or healthy state of the body the portion designed to be exhaled by the skin is carried off imperceptibly by the pores. The entire amount of fluid thus insensibly evaporated by the pores, is estimated at *eleven* grains per minute, while the lungs so sensibly in motion and apparently more active, only evaporate about *seven* grains. Carpenter says, "there is reason to believe that at least 100 grains of azotised matter are excreted from the skin daily," consequently any cause which *checks* this excretory power of the skin must necessarily throw an *additional* and *unnatural* amount of labour on the other excretory organs of the system, and thereby tend to produce a derangement of their functions and cause disease.

According to Dr. Thudichum, "the secretions of the human skin may be divided into *volatile* and *solid*, the former consisting of—1. Carbonic acid; 2. Water; 3. Some volatile acid, not yet accurately determined; and the latter of 1. Urea; 2. Chloride of sodium; 3. Fatty matter; 4. Earthy salts of some fatty solids; 5. Small quantities of some other alkaline salts." Phosphates and salphetes, always present in any other secretion, he has not, he says, ever found in perspiration.

Thus while the excretions of the skin are analagous to some extent to those of the lungs and kidneys, they are not entirely so, but its dignity as an excretory organ becomes more apparent from a study of the quantities of matter discharged by the several organs; for while the lungs in 24 hours discharge *fifteen ounces* of volatile matter, the skin discharges *thirty ounces*, so that two-thirds of all volatile excretions pass by the skin. An almost equal weight of water leaves the body through the kidneys, charged with matter peculiar to that secretion. We can thus understand how it is that the suppression of skin action becomes a fatal source of disease. But as Erasmus Wilson observes :—

"It is not as an emunctory or purifier only that we must regard the skin; its influence and power have a wider range of action in the maintenance of health. Besides comprehending a vast system of drainage tubes, which open on the surface by seven millions of pores, besides, also, a wonderful and perpetual labour, by which the skin is drawing from the blood certain organic elements in the fluid state, and converting them into solid organic formations, which are known as cells and scales, these cells and scales being the tesselated mosaic with which the skin is furnished upon the surface, so as to render it capable of existence in the external world; besides this and much more, the skin is converted into a kind of sponge by the myriads of blood-vessels which enter into its structure—blood-vessels that *many times in an hour* bring the whole—*aye*, *every drop*—of the blood of the body to the surface; bring it that it may furnish the materials for the microscopic pavement; that it may be purified by the abstraction of its unwholesome principles; that it may breathe the vital air of the atmosphere without;—besides this, also, the skin near its surface is one vast network of nerves—nerves, mysterious organs, that belong in their nature to the unknown sources of the lightning, the electric currents of the universe. And besides these, again, there is every variety of animal tissue and contrivance by which all this apparatus is held together and maintained in the best state and position to ensure its safety and perfection. In truth, the contemplation of the structure and functions of the skin, when viewed with the eyes of the mind, is almost overwhelming; and the words of the poet break upon our memory—

"In human works, though labour'd on with pain,
A thousand movements scarce one purpose gain;
In God's, one single can its end produce,
Yet serves to second, too, some other use."

"One word more as to the importance of the skin in the animal economy, and that word a summary of its functions and principal vital attrributes. The skin is a *sanitary commissioner;* draining the system of its impurities; it is an energetic labourer, in that perpetual interchange of elements which, in its essence, constitutes life; it is a regulator of the density and fluidity of the blood; it performs the office of a lung in supplying the blood with oxygen, and abstracting its carbon; it changes the crude organic elements of the blood, so as to render them capable of nutrition; it emulates the heart in giving speed to the circulating blood; it is the minister of the brain and spinal marrow in its properties of sensation; and it feeds and

**nourishes, and keeps in the highest operative condition, that part of the nervous system which is confided to its care.**

**"Viewing the skin in this way, and recognising its just claims to consideration as an important animal organ, we are led to the conclusion that the skin *is a part of the digestive system,* like the liver and kidneys, by virtue of its emunctory and nutritive powers; it is an appendage of the heart, and a part of the system of the circulating of the blood; it is a surface lung, a breathing organ; and it partakes of man's intellectual nature by its close connection with, and dependence on, the brain. In the lower animals, the skin combines in itself alone, the feeling, seeing, smelling, hearing, and judging organ."—*The Eastern or Turkish Bath, &c.*, p. 113, &c.**

From this it will be perceived how vitally essential a sound condition of the skin is to the enjoyment of good health. When its functions are imperfectly performed, the whole body necessarily suffers. The heart, the lungs, the liver, the stomach, the brain, the nerves, the bowels, are imperfectly nourished, and their vitality is moreover oppressed and weakened by the noxious matters with which the blood is loaded. Thus a weight is placed on the very springs of life, while it is only by restoring the healthy action of the skin that this weight can be taken off.

We have further proof of the importance of skin action to Life in the fact, that if an animal is coated over with a varnish impervious to air, by which means the functions of the skin become impeded, and its organism, as it were, paralysed, death in a few hours would be the inevitable result. This has been demonstrated by repeated experiments on the lower animals; it is also true in the case of man. Close the pores of his skin by a similar coating, and congestion of the internal organism would take place, resulting sooner or later in death. There is a case recorded of a young boy who was covered over with a coating of gilt, to represent the Golden Age, at a pageant given by Pope Leo X., and the effect was that, by thus unconsciously impeding the functions of the skin, death ensued in a few hours.

It is an irresistible conclusion, therefore, in which all eminent Physiologists agree, that whatever interferes with or impedes perfect skin action, must be more or less detrimental to health, and calculated, of necessity, to engender disease. "When the functions of the skin are seriously interfered with," says Miller, in his *Organic Chemistry,* "it usually happens that derangements, more or less serious, either of the kidneys or of the lungs occur." And just as that interference is permitted to continue—in proportion as it is perniciously prolonged—so will functional derangements of the internal organism be intensified and rendered organic and incurable.

Dr. Copland, in his edition of *Richrand's Physiology,* refers to cases that came under his own observation which remarkably illustrated the vital functions of the skin. "The lungs," he says, "were partly destroyed from an imposthume, and the side of the chest was consequently contracted." Nevertheless, he found that the cutaneous functions increased so as to supply the deficiency caused by impaired lung-action. All subsequent experience has tended to establish the potent agency of the skin, not only as an "assistant to the Lungs," but also to the whole excretory organism; for it is a well-established fact that there is an anatomical connection between the mucous membrane which lines our *internal* organism, and the *external* mucous membrane, or true skin, which covers the whole body. As Carpenter remarks, "the general term Mucous Membrane may be applied to that great system of membraneous expansions, which forms the external tegument or skin—the lining of the internal cavities whose walls are continuous with it, or Mucous Membrane proper—and the prolongation of this into the secreting organs, forming the tubes and follicles of the glands."* Hence, Erasmus Wilson has observed, that "the lungs are nothing but a bit of skin turned in, just as the internal surface of the lung would become skin if it were exposed externally."

Unfortunately, however, medical practitioners have not heretofore properly understood the functions of the skin, and, therefore, did not seek to make them available as sound physiology and pathology now dictate. The skin was not regarded as supplying a medium through which deranged internal organism could be easily reached and remedially acted on, but was rather viewed as a substance *per se*, liable to many diseased conditions which medical art sought to cure either by experimental external applications, as ointments, lotions, &c., or by the internal administration of drugs, to act through the digestive process. No organ, in fact, has been more misunderstood, neglected, and ill-used, than the skin. It has been blistered, scarified, punctured, and tortured in almost every conceivable way, yet Drug-Medication is still deplorably at fault as regards the possession of specifics for the various diseases considered proper to the skin itself!

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* Human Physiology, 2nd edit., par. 176.

The revival of Hydropathic practice naturally led to greater attention being bestowed on skin functions; but it was not until the establishment of the Hot-air Bath that the real value of the skin attracted the attention it so eminently deserved. It is by the proved amenability of that organism to the soothing yet stimulating and nourishing influences of heat that the great remedial virtues of the Bath, judiciously administered, are brought into action and are enabled to operate. This truth is now so well established that it is already producing, as we shall see, revolutionary changes in medical practice.

## CHAPTER VIII.

### *The Skin considered in relation to Animal Heat—Its susceptibility of being made a Curative Agent in Disease.*

We must further consider the human skin, in its relation to the natural temperature of the body, and as susceptible of being influenced by artificial Heat, for its peculiar organism in these respects makes it the most powerful and active medium for preserving health, preventing disease, and restoring impaired bodily functions.

The possession of a definite amount of inherent Heat, by all living organizations, is absolutely necessary for the performance of vital actions—in other words, for the performance of those functions which are essential to life. As such actions require to be performed uniformly and regularly, nature has wisely provided that the degree of Heat necessary to their performance should be maintained at an equally uniform and regular standard for every species of animal. All living organizations, therefore, have an inherent independent temperature peculiar to themselves, and which is not perceptibly affected by the temperature of the surrounding atmosphere.

As to the mode in which this animal Heat is produced, different theories have been advanced; but as our purpose is not to follow speculative opinions, but to deal with well-ascertained facts, it is sufficient to state there is a general concurrence among physiologists, that animal Heat in man is produced by the combinations of the fluids and solids of the body in the process of Nutrition, although in what precise manner those combinations are effected is not positively determined. It is known, however, that as Nutrition is necessary for all the organs of the body, so is it a function appertaining to all to appropriate and assimilate a sufficiency of Nutritive particles to supply their own wants. This process of Nutritive combination, incessantly going on, has the effect of disengaging—for the purpose of elimination from the system—an amount of carbon or waste, and by union of which with the oxygen of the air we inspire carbonic acid is formed, and in this chemical process an evolution of caloric is necessarily produced. It matters not how this union or combination takes place, or what other hidden agencies may be at work, the result is the generation of animal Heat, which we know is essential to the performance of the functions of life, and we also know that the requisite amount of heat is produced and maintained at a uniform standard within the body itself.

Now, the temperature of the human body is habitually maintained at a standard of 98°, which is called blood heat. Though some exceedingly slight deviations from the standard, attributable to individual idiosyncrasies may be occasionally observed, it appears very surprising at first sight, that, save in disease, this temperature never otherwise varies—that the human body maintains the same degree of warmth, the same standard of Heat in every latitude, and under every atmospheric variation. It is the same, whether exposed to the frozen climate of the polar regions, or to the burning atmosphere of the torrid zone—the same with the thermomoter at 30° or 100° below the freezing point, as at 100° or 200° above it.

It may seem extraordinary that such extreme variations of temperature could possibly be endured by man, when it is considered that if the temperature of his blood was raised above the normal standard of 98° to 112°, or reduced below it to 60°, death in either cases would inevitably ensue. But man, in a peculiar degree and to a marvellous extent, possesses the power of enduring extreme natural variations of atmospheric temperature, and of artificial also. Although water boils at a temperature of 212°, and his own body is maintained at a normal standard of 98°, he can endure habitual exposure to an artificial temperature of dry air as high as from 300° to 600°. Of this many instances may be noticed. Carpenter says:—

> "Many instances are on record of heat of from 250° to 280° being endured in dry air for a considerable length of time, even by persons unaccustomed to a particularly high temperature; and persons whose occupations are such as to require it, can sustain a much higher degree of heat, though not perhaps for any long period. The workmen of the late Sir F. Chantrey have been accustomed to enter a furnace in which his moulds were dried, whilst the floor was red-hot, and a thermometer in the air stood at 360°; and Chabert, the 'Fire-king,' was in the habit of entering an oven, whose temperature was from 400° to 600°."—*Human Physiology*, third edition, par. 888.

Men engaged in various branches of manufacturing industry, such as in Iron-foundries, Glass-houses, Ore-smelting, &c., are habitually exposed for lengthened periods to degrees of Heat ranging from 200° to 300°, and even higher, which they are able to sustain regularly without any detriment to health.

Now the explanation of this is simple, and serves to illustrate the admirable organism of the skin as adapted to act beneficially as a curative medium in disease. The temperature of the surface of the skin is regulated by Exhalation and Evaporation. There are, as we before observed, a vast number of glandulæ spread over the inner surface of the *cutis vera* or true skin, for the purpose of secreting an aqueous fluid for Exhalation. Whatever the temperature of the atmosphere may be above the normal standard, in a degree corresponding therewith is the stimulating action on the secreting glandulæ of the skin. At high temperatures the secretions are proportionably excited. Exhalation is copious. Evaporation takes place rapidly, and thus the skin surface is kept moist and cool. Such is the provision Nature has made to enable man to bear without injury such elevated temperatures as we have noticed.

It follows, therefore, that the capacity of the human body to endure high temperatures with impunity must be measured by the powers of Exhalation and Evaporation its cutaneous organism possesses. Because, were the skin torpid or paralysed so as not to secrete and exhale sufficently, the action of the heat on the skin surface would become unbearable, and if the atmosphere was so charged with moisture that it could contain no more, the transuded perspiration could not, of course, be evaporated, and consequently, as vapour scalds at 120°, death by scalding would result.

Thus, for example, water boils at 212°, when what we call "steam" is formed, but all the coal in England, if heaped into one monster fire, could not raise the temperature of water *one* degree above 212°, as long as the steam is allowed to pass away by evaporation or otherwise. And just so with the human body. Man can endure a temperature of 300° or 600° with impunity for a time, provided his skin organism acts freely, and the perspiration that exhales to the surface is freely evaporated, but not otherwise.

In further illustration of this important function of the skin we may adduce a very simple experiment that has been repeatedly verified, though apparently of so marvellous a character as likely at first to excite general incredulity. A man can sit, with complete impunity, in a Hot-Air Bath raised to a temperature sufficiently high to bake bread or cook a beefsteak! Erasmus Wilson testifies that he sat without the slightest inconvenience in a Bath at 240°, that is 28 degrees *above* the boiling water point. And he says, "if I had had bread, or meat, or eggs with me, they must necessarily have been cooked at that Heat." Now *why* is a beefsteak or mutton chop cooked in a Hot-Air Bath, the high temperature of which the human body can endure with perfect impunity—nay pleasure? Simply because the human skin acts in the manner we have described, so as to keep the temperature of the body at the normal standard by the Exhalation and Evaporation of its superabundant Heat. Not so, however, with the beef or mutton. It has ceased to be *living matter*, and has thus lost its preservative properties. Consequently the Heat gradually penetrates into and permeates the whole substance, thereby effecting the chemical change known as baking or cooking. Thus we have exemplified how remarkable the difference is in the action of Heat on living and dead organic matter.

From what we have said about the importance of exhalation and evaporation under the circumstances stated, it might be imagined, that were the whole cutaneous surface covered over with a coating impervious to the air, whereby its respiratory power would be neutralisad, the internal heat would be raised far above the normal standard, and the body thrown into a state of high fever, in consequence of the suppressed transudation of the superabundant caloric. As we before observed, death in a very short time would be the necessary result, but death how produced? Death would *not* follow from an abnormal *increase* in the temperature of the body, as *prima facie* it might appear natural to infer, but from a positive *decrease* which assuredly takes place, thereby proving that cutaneous respiration is essential to the generation and maintenance of animal Heat. This fact has been demonstrated by carefully conducted experiments on the lower animals; and it is conclusive as to the vital importance of the skin as a Respiratory organ. We are thus enabled to understand, as Carpenter remarks:—

> "How, when the secreting power of the lungs is nearly destroyed by disease, the heat of the body is kept up to its natural standard by the action of the skin. A valuable therapeutic indication, also, is derived from the knowledge which we gain of the importance of the Cutaneous Respiration; for it leads us to perceive the desirableness of keeping the skin moist, in those febrile diseases in which there is great heat and dryness of the surface since secretion cannot properly take place through a dry membrane."—*Human Physiology*, 3rd edit., par. 891.

It will now be understood, that there is no foundation whatever for the popular, and to some extent, professional prejudice, about the action of the Hot-air Bath having the effect of increasing the temperature of the body even to a dangerous degree. Such a prejudice, as we have seen, is not supported by physiology, nor warranted by experience, but is in positive antagonism to the divine laws of our organism. So far, indeed, from high temperatures proving injurious, it is on the adaptability of the skin to sustain high artificial temperatures that the Bath relies for its marvellous sanitary and sanative virtues. It is by the influence the Bath thus exercises that healthy skin-action, so essential to Nutritive Life, is maintained, and at the same time that, naturally and effectively, through the medium of the skin, the Bath is enabled to act on the whole internal organism which contributes so materially to the same great purpose.

We will now proceed to show that no means have as yet been discovered at all comparable with the Bath, for maintaining the intricate, delicate, and wonderful organism of the skin in a sound normal condition—strengthening its action, and enabling it to discharge efficiently the vital functions with which Nature has entrusted it. Lord Bacon shrewdly remarked that the "belly is the father of the family," and, doubtless, the condition of the digestive organs powerfully influences mental and bodily health. "But," observes Carpenter, "we may say with Dr. Prout, that a sort of digestion is carried on in all parts of the body," and it is by imparting vigour to the whole digestive system, enabling it to perform its important functions with ease and regularity—upon which intellectual, moral and physical health, is so largely dependent—that the Bath, by its potent and salutary action on the skin, proves an invaluable therapentic agent.

## CHAPTER IX.

*The action of the Bath as Preservative of health, and Preventive of Disease—It subdues evils arising from artificial habits of civilised life, and corrects, eradicates, or checks inherited predispositions to disease.*

WE have alluded to the peculiar properties of the Hot-Air Bath as being Preservative of health and Preventive of disease. These properties matured experience has demonstrated the Bath to possess, though the study of the action of Heat on the human system in its diseased conditions is, as yet, in comparative infancy. Still enough is known to satisfy reason, and justify the scientific physician in regarding the Bath as a Therapeutic agent of the very highest value, as there are no diseases in which it cannot be made beneficially available, while in many it possesses a curative power, beyond comparison, superior to any other agent the medical profession can command. Of course we refer to the Bath skilfully directed in accordance with enlightened and scientific Hydropathic practice.

Erasmus Wilson, a man of undoubted professional eminence, has admitted that, before he was led to investigate the peculiar merits of the Bath, he was quite unconscious that he had anything to learn on the subject. He says:—

> "I thought I knew as much about baths as most men. I knew the hot, the warm, the tepid, and the cold; the vapour, the air, the gaseous, the medicated, and the mud bath; the natural and the artificial; the shower, the firework, the needle, the douche, and the wave bath; the fresh-river bath and the salt-sea bath, and many more beside. I knew their slender virtues, and their stout fallacies: they had my regard, but not my confidence, and *I was not disposed to yield easily to any reputed advantages that might*

*be represented to me in favour of baths."—The Eastern or Turkish Baths*, preface.

In this frame of mind he made a personal trial of the Bath, and was induced to study its nature, action and effects. A thorough conviction of its superlative value followed, because his mind was superior to the prejudices engendered by preconceived opinions, and was open to receive the truth. He says:—

> "I discovered that there was one bath that deserved to be set apart from the rest—that deserved, indeed, a careful study and investigation. The bath that cleanseth the inward as well as the outward man, that is applicable to every age, that is adapted to make health healthier, and alleviate disease, whatever its stage or severity, deserves to be regarded as a national institution, and merits the advocacy of all men, and *particularly of medical men—of those whose special duty it is to teach how health may be preserved, how disease may be averted.*
>
> "My own advocacy of the bath is directed mainly to its adoption as a social custom, as a cleanly habit; and, on this ground, I would press it upon the attention of every thinking man. But if, besides bestowing physical purity and enjoyment, it tend to *preserve health, to prevent disease, and even to cure disease*, the votary of the bath will receive a double reward."—*Ibid.*

Now, as *Preservative of Health*,—the peculiar and invaluable properties of the Bath act, as we have observed, through the medium of the skin, by maintaining its vital organism in vigorous action, on which healthy Nutritive Life is so immediately and materially dependent. If we compare the action on the skin of a common hot-water bath, or of any bathing or washing process which merely cleanses the outward surface of the skin, with the mode in which the Hot-Air Bath acts, the vast and salutary difference cannot fail to be at once discernible. Remembering what we have said about the surface of the whole body being covered over with some seven millions of tubes or pores—that these tubes are each about a quarter of an inch in length, and if stretched out, and laid end to end, would extend nearly twenty-eight miles—that this immense drainage system is designed by nature to relieve the body of its vicious secretions, and in return to convey by respiration and absorption healthy nutriment from the external atmosphere into the system

—remembering, also, that in all cases of imperfect or obstructed perspiration, a deposit is formed at the mouth or external opening of each pore, which has the effect of thickening and hardening the epiderm or scarf skin, thereby tending to further paralyse the healthy action of the skin organism, and sow the seeds of disease—taking these well-established truths with us, any man of ordinary intelligence can readily appreciate the unapproachable superiority of the Hot-Air over all other baths as a potent sanitary and sanative agent.

For what does the hot water bath, or any mere surface washing of the body do? No harm, assuredly, but *the pores are not cleansed.* The scaly deposits of the scarf skin, which in a natural and healthy condition of body exfoliate to keep the pores free, are not removed by mere external bathing or washing, nor are the excretory functions of the skin stimulated, as they unquestionably are by the Hot-Air Bath. At best, ordinary surface washing only cleanses the natural sewers of the body at their *outlets,* and of such cleansing it may be said—

> "It will but skin and film the ulcerous place,
> Whiles rank corruption, mining all within,
> Infects unseen."

Ordinary bathing or washing may keep the surface of the body in what is considered a state of cleanliness; but as compared with the action of the Hot-Air Bath, such cleanliness is only like removing filth from the *mouth* of a sewer, instead of *flushing the whole sewer itself.* This is what the Hot-Air Bath does, and hence its immeasurable superiority over all other appliances, as an effectual means by which the whole sewerage system of the human body can be flushed, scoured, and cleansed of impurities, and the skin organism maintained in vigorous vitality. Persons who are in the daily habit, for instance, of using the shower bath, imagine that the Hot-Air could add nothing to their cleanliness, comfort, and health; but they are very much mistaken, for, as it has been truly said, "the blacksmith begrimed with smoke and dirt, who *freely perspires* over his daily task, is cleaner, in the true sense of the term, than the *best* *washed* individual in the land. Surface washing alone will not suffice. To secure health, the blood itself must be purified, its in most channels flushed and cleansed." This the Hot-Air Bath alone can do, and the truth of this the habitual surface-washer can test for himself. Let him take a Hot-Air Bath, and he will be astonished at the amount of apparent dirt which the gentle friction of the hand on the softened epiderm will expose to view. This is the dead scarf skin, the removal of which promotes cutaneous respiration, with all its consequent advantages.

We have already seen how essential cutaneous respiration is to health—that animals coated over with any substance impervious to air invariably die in a very short time. If, therefore, death would necessarily ensue from the total closure of the pores of the skin, it follows that any partial closure, involving imperfect action, must prove proportionately detrimental to health. Hence, so vital are the functions the skin is designed to perform in the animal economy, that the highest medical authorities concur in affirming, that the maintenance of its organism in a sound state is essential to vigorous bodily and mental health, and at the same time one of the very best preventives of disease. It is affirmed that fully three-fourths of the diseases to which civilized man is subject, are attributable to the closure of the pores of the skin, and therefore it is that the Hot-Air Bath possesses such invaluable qualities; for by no other means, at once so simple and enjoyable, can the functions of the skin be maintained in perfect vigor, and a healthy condition of body preserved.

We must also take into consideration the habits engendered by civilized life, which is so exceedingly artificial that few, out of hundreds of thousands, live in anything approaching to a strict obedience to the laws of the human economy. Riches and poverty alike war against health, that is, have a tendency to create habits and modes of life which impair natural functions and induce or predispose to disease. Thus we almost necessarily depart in our customs and habits from what Nature designed, and so far as we do so, the greater is the tendency to impaired health. It is as a corrective of these morbid tendencies, that the Hot-air Bath comes as a blessing to our civilization, by affording a simple, yet powerful and pleasurable means, by which to counteract or avert the injurious effects it is calculated to produce. As Erasmus Wilson observes :—

> "A healthy condition of body is normally preserved by a proportioned amount of air, exercise, or labour, and food; but even the air, the exercise, the labour, and the food, must be proportioned in its kind and in its order, to the peculiar constitution of the individual. . . If I were asked to select an example as a standard of the just equipoise of these conditions, I should take the ploughman-intellect at the standard of day-to-day existence, moderate food, vigorous, but not over-strained, labour, plenty of air, and plentiful exposure. *But who would care to accept existence on such terms as these?* Give us brain, give us mind, however ungovernable, however preponderant its overweight to the physical powers, however destructive to the powers of the body. In a word, we select a morbid condition—our meals, our air, our exercise, our indoor and outdoor habits *are all unsound*, the necessities of our life, of our position, require that they should be unsound. How grand, therefore, the boon that will correct these evils without the necessity for making any inconvenient alteration in our habits. *That boon is the Bath.*—*Ibid*, p. 143.

By availing ourselves of such an inestimable boon we can counteract, in a large degree, the injurious influences induced by an artificial mode of life, which has become a necessity, as it were, of our civilisation. The manifold evils certain to arise from exhausting mental labour, and perseverance in sedentary habits, can be corrected or alleviated. We can promote the purification of the blood, for which exercise would be otherwise indispensible. A healthy tone can be imparted to a jaded and sickly appetite, and the digestive organs strengthened. In fine, by judicious use, the Bath can be made to supply, in a large degree, the place of outdoor exercise, and it thereby becomes an incomparable artificial preservative of physical and mental health.

As a *Preventive of Disease* the Bath is equally efficacious. for it stands to reason, that whatever has a tendency to preserve health, must naturally operate to strengthen the system and fortify it against the insidious inroads of disease. It is the opinion of Rolt, "that three-fourths of the diseases to which civilized man is subject, are attributable to the pores of the skin becoming stopped up," and Hufeland says, "the greater part of contagious poisons are conveyed to us through the skin." But it is only when the skin organism is in a torpid condition—when its perfect action is impeded—its functions improperly performed, that such poisons are retained in the system to contaminate the blood, derange the economy, and develope disease that may become dangerous to life. The beneficial effects of healthy skin action, in this respect, are very clearly pointed out by Erasmus Wilson:—

> "The faculty *of preventing disease*, as exercised by the skin, besides being indirect and operating on the general health of the body, is also direct. The skin repels the depressing effects of cold, of alternations of temperature, of extreme dryness or moisture, by virtue of its own healthy structure—by its intrinsic power of generating heat; and it also repels other causes of disease, *such as animal and miasmatic poisons*, by its emunctory power, which enables it to *convey them directly out of the body.*
>
> "In unwholesome states of the atmosphere, in an atmosphere of malaria, which must necessarily pass into the body with the inhaled air, and being in the lungs must be absorbed by the blood, we naturally inquire, *by what means we escape the morbid effects of such malaria?*
>
> "The answer is:—the malaria is conducted out of the body as rapidly as it is introduced, by the emunctory organs—by the liver, kidneys, and *notably by the skin.* If the powers of the skin be weak, then the poisons are detained in the blood, and disease is the result; but if the skin be healthy and active, then they can do no evil, and ultimately they become innocuous."—*Ibid*, p. 125.

Dr. Millingen, physician to the Sultan, whose long residence and experience in Constantinople entitle his opinions to be received with authority, assures us that among the Turks the Bath, as they imperfectly employ it, is regarded as their sole reliable protective against disease. He says that:—

> "The working classes among the Turks—for such classes do exist, and are as numerous and fully more hard-working than elsewhere—know of no other means of prevention, on feeling indisposed, but the bath. It is looked upon so much in the light of a panacea by the lower orders, that they hardly ever dream of consulting a physician when taken unwell. If the bath fail

to cure them, nothing else will succeed. This prevailing conviction accounts, in a great measure, for the *total absence of dispensaries and civil hospitals, not only in this large city, but throughout the whole empire.* Yet, I apprehend, from the tables of mortality monthly published, that the mortality is not greater than it is in countries blessed with those institutions. The higher classes, and women especially, do not, as with us, know much about regular exercise, so that *were it not for the ample compensation afforded by the bath, they would not enjoy the excellent health they generally possess.*

"I must remark that intemperance, of late years, is much on the increase; and, moreover, that it is carried on to an extent which, if stated, might be looked upon as fabulous. Yet the gout is not more prevalent, nor *delirium tremens* either. This immunity I can attribute to *nothing else but to the expulsion of the alcohol, circulating in the lungs and skin, during the stay in the bath.*"

The Bath acts exactly in the same way as a preventive of disease as it does in maintaining health—its action is through the medium of the skin by stimulating and promoting healthy Nutrition, thereby invigorating the system to resist morbific influences. It is thus pre-eminently Hygienic, and it ought to be esteemed as beyond price by every rational man who desires the blessing of healthful existence. "It is of the greatest importance," said Benjamin Franklin, "to *prevent diseases*, since the cure of them, by physic, is so very precarious." But "preventive medicine" is not taught in schools or colleges, for *it is not a commodity that pays*—there is no marketable value attached to it by society. The inconsistency of this is glaring; for, as Dr. Baynard observes, "Long life is so desirable, and so valued and esteemed among men, that 'tis every man's hope to obtain it. And yet we see, notwithstanding this great like and love men show for it, how remiss and careless the greatest part of mankind are in the means to secure it." One of the ablest expounders of the science of human life says:—

"From all we know of the laws of life in connexion with the organised matter of the human body, we have not the least physiological reason for believing that those conditions and operations of living organs on which the continuance of life depends may not be sustained, in a possible state of the human constitution, for many hundreds of years.

"Granting the position, that he who attains to a hundred years has a remarkably strong constitution, I ask, how the individual came to the possession of such a constitution? Was it the special, direct, and extraordinary gift of the Creator? or was it the natural result of a succession and concurrence of causes and effects operating in the constitutional nature of things? Most assuredly the latter; and those causes and effects, as a general law, *are perfectly within the sphere of human agency, and under the control of human ability.*"—Sylvester Graham's *Science of Human Life*, para. 634, 661.

Easton, in his work on *Human Longevity*, gives instances of males and females who attained ages varying from 100 to above 185 years, as follows:—

| | | |
|---|---|---|
| Above | 100 to 110 | 1,310 |
| ,, | 110 to 120 | 277 |
| ,, | 120 to 130 | 84 |
| ,, | 130 to 140 | 26 |
| ,, | 140 to 150 | 7 |
| ,, | 150 to 160 | 3 |
| ,, | 160 to 170 | 2 |
| ,, | 170 to 185 | 3 |

Thus, there is no reason to doubt the conclusion arrived at by Hufeland and others, that, by his organism, Man is a centenarian. Yet it is calculated that of 100 men 50 die before the 10th year;

| | | | | |
|---|---|---|---|---|
| 20 | between | the 10th | and | the 20th. |
| 10 | ,, | 20th | ,, | 30th. |
| 6 | ,, | 30th | ,, | 40th. |
| 5 | ,, | 40th | ,, | 50th. |
| 3 | ,, | 50th | ,, | 60th. |

Leaving only 6 out of every 100 that exceed their 60th year. Why is this? Because—

"It seems as if the grand experiment of mankind had ever been to ascertain how far they can *transgress the laws of life*, how near they can approach to the very point of death, and yet not die, at least so suddenly and violently as to be compelled to know that they have destroyed themselves.

"I do not affirm, or intend to imply, that the present generation of the human species can, by any means, all obtain a hundred years of life. I know that in the present condition of the race there is a very great inequality of constitutional power. Some individuals are born with constitutions too feeble to sustain the functions of life a single year; others have power enough to maintain a victory over the causes which induce death for three, five, ten, twenty, forty, eighty, a hundred, or a hundred and fifty years. Some are born without any great tendency to a particular disease, while others are born with the most powerful predisposition to disease of some kind or other."—*Graham*, pars. 639, 663.

There is thus a vast amount of *avoidable disease* in society—of *premature mortality* taking place—of deaths that by ordinary hygienic precautions could be averted, even where undoubted predisposition to disease has been largely inherited. The slightest attention bestowed on the mode in which the processes of organic life are conducted will make this truth apparent, and illustrate the marvellous aptitude of the Bath to prolong life by counteracting partially or entirely predispositions to disease.

We have seen (Chap. V.) that the whole organism of the human body, by which the functions of animal life are carried on, is subject to the continued action of two conflicting forces—one an inherent tendency to decay and die out, which is the law of all organised matter; the other, the preservative principle providentially designed to counteract that destructive tendency, so as to enable man to live out, in his natural healthy state, his allotted term of years on earth.

This inherent tendency in our organism must necessarily be continuously operative, always active, incessantly at work to accomplish its purpose—decay and death. But the preservative principle is equally active to supply new material with which to repair and replenish the waste so caused, and in this process of decay and renovation consists the very essence of all we know about our organic life. It follows, however, that when the constitutional organism of the individual is entirely sound, the normal activity with which these two conflicting forces perform their respective functions, produces, as the result, perfect health. Thus, when the balance between waste and supply is duly regulated as Providence designed it to be, Organic life is maintained in its highest excellence. It is the deviations from this standard, when the balance has inclined one way or the other—when waste is in excess of nutrient supply, or *vice versa*, which primarily cause all disease. Hence predispositions to disease are nothing more than the natural effect of deviations from the sound constitutional standard originally assigned by the Creator to man—effects caused by parents who violate, one way or other, the laws of their being, and transmit to their innocent offspring the constitutional penalty of their transgression.

Thus, the greater number of infants born in civilized life, come into the world with predispositions to disease of one kind or other—with an inherited tendency to develope some imperfection calculated to abbreviate the natural term of existence which perfect constitutional organism is destined to endure, and it is to such cases that "Preventive Medicine"—which is essentially Hydropathic—is peculiarly applicable. The skilful scientific Hydropathist knows perfectly well that, when timely consulted, he can exercise a salutary influence over predispositions to disease. With rational confidence he can undertake, in some instances, to eradicate them altogether, and in others to arrest their fatal tendency so as to procrastinate their morbid development for years. This he is enabled most successfully to accomplish by availing himself of the functions of organic life—of the process of continuous composition and decomposition which that life involves, and by the natural course of which it is computed that the whole organism becomes renovated once in seven years.

The whole secret of this command over the source and springs of life consists in facilitating, by natural means, the process of renovation. Liebig, who is an authority of the highest repute, has testified that "by means of the water-cure treatment *a change of matter* is effected in a greater degree in ***six weeks***, than would happen in the *ordinary* course of nature in *three years*." But when Liebig wrote he knew nothing of the Bath as the perfection of Hydropathic agents, and by the healthful potency of its action on the organism of Nutritive life through the medium of the skin, the renovating process in disease can be even more rapidly accomplished than he surmised. The Bath acts naturally, salubriously, and promptly, with a marvellously and unerring certainty that nothing else can equal, in facilitating the renewal process of organic life; and in this way it is that inherited predispositions to disease are susceptible of correction, or of total eradication, by its incomparable agency, in conjunction with the other means which scientific Hydropathy commands and applies.

It will thus be understood that to preserve health, and to prevent disease, are the great sanitary ends to be attained by the judicious use of the Bath as a social—a domestic—institution. Briefly, *Health is preserved* by the instrumentality of the Bath maintaining in vigorous action the vital organism of the skin, on which the functions of circulation, nutrition, and elimination so largely depend. *Disease is prevented* by hardening the body against the effects of variations and vicissitudes of temperature, which is of incalculable advantage in a climate so variable as ours; also, by imparting power to resist miasmatic and zymotic influences, and by strengthening the system against the aberrations of nutrition, and the prolific train of evils that follow the disturbance and derangement of the nutritive functions; and, furthermore, by correcting, eradicating, or keeping in subjection, inherited predispositions to disease. In this way the Bath rises to the dignity of an unequalled sanitary institution, and becomes an indispensable household necessity to those who desire to possess in their own homes a simple, safe, and pleasurable means for the preservation of health, the prolongation of life, and the heightening of its rational enjoyments.

## CHAPTER X.

*The Bath as a Curative Agent—The value of Temperature—Popular errors concerning Heat and Cold—Ignorance of Medical Men respecting the Therapeutical Properties of Temperature—The Bath as a Therapeutic—It should not be employed in conjunction with Drug remedies—Its general applicability to alleviate all forms of bodily derangements.*

We now come to the consideration of The Bath more particularly as a curative agent in the treatment of disease. What has been already said about its efficacy as a preservative of health, and as a prophylactic, has a direct bearing illustrative of its sanative influences. It is from the fact of the human body being able to endure a high degree of Heat, when the medium which conveys it is pure and comparatively dry air, that the Bath can be so safely and generally employed as a curative power. When so used, observes Erasmus Wilson, "*the Bath becomes a medicine of the most potent kind*, and should, therefore, be left to medical management." Undoubtedly so; but that "medical management" should be enlightened and scientific—not identified with the absurd dogmas and destructive practices of the Drug school. No patient possessed of common sense ought ever to combine the prescriptions of the Physic-Doctor, with the use of the natural and salubrious agents employed by the accomplished Hydropathist.

For curative purposes the Bath requires generally higher temperatures than are necessary for ordinary sanitary use. The value of the higher temperatures is founded on the well-known property of Heat to destroy organic impurities—as odour, miasma, animal poison. For instance, the poison of that terrible scourge, scarlet fever, is entirely destroyed at 212°, and the same temperature is equally fatal to the poisons of all other fevers, and, there is every reason to believe, of the poisons of all other diseases. For sanitary purposes such a high temperature is neither necessary nor generally desirable. A range from 125° to 145° is amply sufficient for general use, because the object being to induce a gentle, continuous, and agreeable perspiration, this can be thoroughly, and, as a rule, much better, effected in a state of health, by a moderate rather than a high degree of temperature.

With respect, however, to the Therapeutic properties of Heat, the medical world is as yet in a very primitive state of knowledge. "*We have hitherto known nothing of Heat as a treatment of disease,*" is the candid admission of Erasmus Wilson. "I do not know any work where it has been referred to in the most distant manner." It is astonishing that such a statement can be truthfully made respecting the state of medical knowledge on this subject, and more astonishing that scienific minds should have lingered for hundreds of centuries ont the very threshhold, as it were, of a most important discovery, for since the days of Hippocrates hot applications in a variety of forms, as warm water and vapour baths, stupes, poultices, and other contrivances, have been always familiar to medical practitioners. Still hot-air, *as now applied,* was never made available as a medical agent until the establishment of the Hot-Air Bath by Dr. Barter, while the experience that has since been obtained promises to effect a revolution in the whole system of medical practice.

It is passing strange that it should have been so, because medical scholars were familiar with classical antiquity. In England we have the interesting remains of the Roman Baths, and in Ireland we had the "sweating-houses" in actual use from time immemorial down to our own day, while the customs of other countries revealed to us by travellers, ought to have instructed inquiring minds, that an institution like the Bath could not possibly have survived the decadence and ruin of empires, and been preserved, through thousands of years, among divers nations in every quarter of the globe, unless it possessed inherent properties of utility.

However, since the establishment of the Bath, considerable progress has been made in investigating the alleviative and curative properties of Heat on the human system in its diseased conditions. By experiments carefully instituted and conducted, we know that certain beneficial effects follow the exposure of the body to the influences of Heat, and although we may know little or nothing absolutely about the nature or essence of what we call Heat, still that does not militate against the utility of its existence, or our application of it to practical purposes.

Generally, indeed, in speaking of heat and cold, in reference to the human body, the language employed is very vague, loose, and unphilosophical. In common parlance, the term "cold" is used to imply an absence or want of heat. "I am very warm," and "I am very cold," are phrases that popularly convey two essentially different states of bodily temperature. Yet, in reality, it is not so; for while the body may be shivering with cold, or glowing with warmth, although different sensations are experienced in each case, still the temperature of the body—the inherent heat of the system has neither increased nor diminished, but remains in both cases exactly the same.

How, then, are the two different states of feeling produced? How is it that the temperature of the body is exactly the same when we experience sensations of cold as when we have sensations of warmth? The explanation is simple. We assume the reader has in his mind what we said respecting Animal Heat and the circulation of the Bloŏd in preceding chapters. If so, he will understand that the temperature of the body is invariably maintained, irrespective of Atmospheric influences, at a normal standard of 98°, while the circulation of the Blood is materially affected by various circumstances. In this fact lies the solution of the apparent mystery; for, in reference to our sensations, what we call "Heat" and "Cold," are not *positive agents* in themselves, but are mere names for the *effects* produced by the rapidity or languidness of Blood circulation.

Thus, in the paroxysms of the different types of intermittent fever, when the cold stage takes place with shivering of the body and chattering of the teeth, the blood has receded from the cutaneous surface, and circulates languidly and feebly through the internal organism. A reaction follows by an effort of nature to relieve itself; the blood rushes to the cutaneous surface—a feverish sensation of warmth is diffused over the whole body, and profuse perspiration takes place. But while these alternate sensations of extreme cold and heat are experienced, the inherent temperature of the body remains at 98°—neither augmented nor lessened; and the different feelings in the two stages arise solely from the decrease and increase in the circulation of the blood on the surface.

On the all-important fact, therefore, that we have perfect command over the Blood circulation, by subjecting the skin organism to the influences of artificial heat, the whole sanative virtues of the Bath depend. Remember, as we have explained, how every drop of blood courses through the whole circulatory system many times in an hour—how, by subjecting the body to the artificial temperatures of the Bath, we can bring every drop of blood freely to the skin surface, and subject it to a purifying process not inferior to that which it undergoes in the lungs—how, by thus attracting the blood to the skin surface we can relieve congestion of the internal organism, and at the same time promote healthy nutrition in a manner otherwise unattainable—reflecting on these facts, we will readily understand that, in diseased bodily conditions, the therapeutic power of the Bath consists in the combined action of all these truly sanative influences by which decomposed waste—a prolific source of disease—is rapidly eliminated from the system, and blood purification, the foundation of organic life and health, rapidly and simultaneously effected.

But, correctly speaking, it is not Heat *alone* that constitutes the curative property of the Bath, though, for sake of brevity, Hot Air is referred to as its peculiar and distinguishing feature. It is by variations of Temperature—by the alterations of degrees of heat and cold judiciously applied—by the action and reaction on the human system so produced, established, and varied at will, that the Bath becomes so ready, so safe, and so powerful a Therapeutic.

Erasmus Wilson has admitted the ignorance of medical men concerning the therapeutic properties of Heat, and with equal truth he might have applied the same observation to Cold, or indeed to Temperature generally. It is only since the successful development of scientific Hydropathy that a few enquiring minds among the Medical Profession have paid any particular attention to temperature as possessing any remedial properties in disease. But when medical men get an inkling of a natural truth, they are apt to pervert it—to mar its utility by allying it with their drug practices. There is a tendency to rush from one extreme to another, and we now read of specifics and panaceas in the shape of ice bags, &c., recommended by drug practitioners in conjunction with their own *medicamenta*, as wonderfully curative in such formidable diseases as Asiatic Cholera.

In this way natural agents filched from Hydropathy are scandalised by forced association with "pharmaceutical filth;" but what is perfectly safe and highly remedial in the hands of a skilful Hydropathist, losses its virtues, and frequently becomes fraught with positive danger, when ignorantly employed in combination with the unnatural resources of the Drug School. Temperature is not an agent to be rashly trifled with in disease. Its full powers are only now in course of development. Its influences on the nervous centres, and on the whole human economy, cannot be estimated too highly, for already it is an established truth, that when skilfully applied by the accomplished Hydropathic Physician, it is beyond comparison the most powerful and faithworthy therapeutic agent we possess.

From what has now been said concerning the general action of the Bath on the processes and functions of animal life—the sources and springs of vitality and health, there will be no difficulty in understanding its peculiar power and incomparable excellence as a remedial agent in the varied phases of diseased bodily conditions. The opinion has been already expressed that this remedial power extends, without limitation, over every form of disease—that there is not any known form of bodily derangement over which the Bath is not capable of exercising, at least, a soothing alleviative influence, and this too, even in the most hopeless cases, where all the resources of Drug Medication are utterly at fault, or, are only operative in torturing the sufferer to the grave.

This opinion is not speculative—it is the result of no fanciful hypothesis or fine-spun theory, but is based on sound physiology verified by experience, while its perfect truth commends itself to the common sense of every intelligent mind that will bestow a moment's reflection on the subject.

Just consider how the Bath acts on the skin, and through it on the whole internal organism; then consider what known form of disease there is in which even a Drug-doctor would deem it desirable to *close up* all the pores of the skin—to retain in the expiring system its *poisonous waste*—to increase the *congestion* of every part of the internal organism, and place additional clogs on functional action—consider these things rationally, and then say—In what form of disease would such practice be deemed otherwise than murderous? It is at once admitted, that when such a form of disease has been discovered, to it, indeed, the Bath will *not* be applicable. But to all others sound Physiology, sustained by experience, assures us that, although the Bath is no panacea for "all the ills flesh is heir to," it can, nevertheless, be employed with confidence, in all diseased bodily conditions, for its action, even on incurable disease, must be highly beneficial as an *alleviative*.

Before referring more particularly to some forms of bodily derangements in which the grand remedial powers of the Bath have been satisfactorily tested by experience, it will be useful to notice the prevalent professional and popular errors which obscure and mislead, concerning the very *nature of disease*. From the descriptive outline that has been given respecting the constitution of the human organism, and of the functions it has to perform for the sustentation of life and health, the reader is in a position to consider the vexed questions that still agitate the medical world concerning the nature and source of disease. Not only so, but from what has been said about the general action of the Bath on that organism, the natural geniality of its influences in the treatment of disease, as contrasted with the means of Drug practice, can be more satisfactorily considered. But it consists with common sense, that before undertaking the treatment of disease, a distinct and rational idea ought to be entertained respecting the all-important question—*What is Disease?* This shall now be considered.

## CHAPTER XI.

*Ignorance of Disease by the Drug School—Proofs afforded by the London Physicians—This ignorance the basis of Drug Practice—Disease as a remedial effort of Nature is subject to fixed and discoverable laws—Opinions thereon—Mal-Nutrition the source of all Established Disease—Evils arising from Medical Nosology—All Disease naturally divisible into Organic and Functional, and has its primary source in imperfect or perverted nutrition.*

NOTWITHSTANDING the research and experience of all the Professors who have laboured Medicine for toilsome centuries, there is even now little agreement among the Faculty concerning the cause and treatment of any single disease! Although Physiology and Pathology have been successfully cultivated into useful sciences, the Profession as yet acknowledges no authoritative exposition respecting *the nature of disease.* The most discordant opinions still prevail on the subject, and the light of science has been turned aside, and the fruits of experience perverted, to sustain the unphilosophical teachings of Drug Schools, which are now, as they always have been, based on speculative fallacies as to the cause and nature of disease. The deplorable state of ignorance in which the Profession is now involved, is demonstrated by the appointment of the Therapeutical Committee of the Harveian Society of London, already referred to, for the purpose of gleaning some information about the nature of disease and the action of drugs! The proceedings of this Committee are also highly instructive, and afford convincing proof—were additional proof required—of how haphazardous and murderous Drug-practice, as blindly followed, must necessarily be. The Medical Journals, in reporting the first meeting of the Committee, say:—

> "It was agreed to commence proceedings by taking up the following subjects for investigation, viz.—The natural history of *rheumatic fever*, and its treatment by, first, *alkalies;* second, *blisters*. The natural course of acute idiopathic pleurisy, and its treatment by *calomel* and *opium*, with fomentations; *iodide of potassium* and fomentations, and the natural course of acute eczema.
>
> "It was resolved to circulate the subjoined questions among the medical men of the United Kingdom. Queries—Have you found any of the following Drugs, viz., Digitalis, Cantharides, Chlorate of Potash, Belladona, Arsenic, Quinine, and Tincture of the Muriate of Iron (as distinguished from the other forms of iron) particularly useful in any special form of disease? In what form of preparation, and in what doses, are you in the habit of administering these drugs, and what results have you observed to follow their administration in the diseases to which you refer?
>
> "Can you from your personal knowledge give any information respecting the use and doses of *any drug* not commonly employed, or respecting any method of treating any disease, which you have found particularly useful in your practice, or can you give information as to any fact in therapeutics not commonly known to the Profession?"

Here, then, is an authoritative declaration of the helpless ignorance concerning *disease* and *drugs* which now characterises the profession, after all the accumulated experience of centuries acquired by physicing countless thousands to death. It will be observed, however, that this Committee, representing the collective wisdom of the London Physicians, still cherishes exploded notions about Disease, and clings with bigoted faith to the unphilosophical assumption that it is something to be killed in the system or expelled from it, by mineral and vegetable poisons.

It is for the common sense of the public to judge of the estimation in which Physic and Physicians ought justly to be held, in the face of such confessions of deplorable ignorance made by the London luminaries of the Profession! Rheumatic fever, pleurisy, and eczema, are ordinary diseases, and yet these Physic-sages admit they are without any recognised mode of treatment, and want to know something about their "natural history" and "course!" Then look at the formidable list of potent poisons they send queries through the country to glean information concerning—poisons which it is their daily practice to administer in varied doses to credulous dupes, without any certainty of benefit, but the reverse; thus recklessly experimentalising on diseases about which they confessedly know little, and with poisons, too, about the alleged remedial action of which they are equally in the dark! No wonder, indeed, that Dr. Bostock declared—"*Every dose of Medicine given is a blind experiment upon the vitality of the patient.*"

False and illogical notions about Disease, lie at the root of all Drug-systems, and are the basis of all Drug-practice. The study of Medicine can never be scientifically cultivated, nor investigations into the nature of disease, and the action of remedies, be rationally and hopefully conducted, as long as false principles are assumed, and the object in view is not to attain truth, irrespective of preconceptions, but to build up and sustain systems of Medication essentially erroneous, and opposed to Nature. As Dr. Andrew Combe observed, in his paper *On the Observation of Nature in the Treatment of Disease*:—

> "The great defect in the study of Medicine, and in all investigations connected with it, at present seems to me to consist in the nearly total absence of *guiding principles*, and in the neglect of the great rules of Bacon, and more especially of the *observation of Nature*, as the only solid foundation on which Medicine, or any other science, can rest and advance towards perfection."

Preliminary, then, to any rational treatment of Disease, it is essential to have an accurate conception *first*, concerning the nature of what is called Disease, and, *second*, concerning the appropriateness of proposed remedies, which, to be appropriate, must be in harmony with Nature. On these points, clear and truthful ideas must be entertained, for it has been truly said, that "without clear ideas, logic is nothing, philosophy is nothing, reason is nothing, truth is nothing"—knowledge, indeed, is but a confused rhapsody. Let us then consider these points—

The Ancients, we know, referred all Diseases to a special supernatural origin, and their ideas were not more clouded, while they were much more simple, than those of modern Physicians, who have split into three leading schools on the subject. One teaches that all disease is referable to certain conditions of the fluids of the body; another that it consists in a peculiar condition and action of the solids; the other combines both theories, and implicates both fluids and solids. Sound philosophy, however, has nothing to do with such vain and fanciful speculations, but looks to Nature alone, and reads by the light of careful observation the varied phenomena of Disease.

Dr. Hooper, in his *Lexicon Medicum*, has correctly defined disease to be—"*any deviation from the natural and healthy action of the whole system, or of any particular organ.*" Disease is thus a departure, in a greater or less degree, from that perfect working of our vital organism which constitutes the state we call perfect health. It is not, therefore, a something *foreign* to Nature—a something outside the human organism that has been put into it, but is the necessary result of the direct action of that organism itself. Hence disease is an effect ordained by the Creator to follow the exposure of the bodily economy to certain morbific influences, and is, therefore, subject to natural laws just as certainly and as invariably as Health is subjected, for as Dr. Andrew Combe observes:—"All the operations and actions of the living body, *whether healthy or morbid*, take place according to fixed and discoverable laws. *God has left nothing to chance.*"

Thus, we arrive at a great truth—that, as the Creator designed the normal operations of our vital organism to be productive of health only, *the phenomena which we distinguish as disease can never be the legitimate result of those operations*, but must be induced by something that has interfered with and impaired their natural and healthful action.

Now, we have seen that the Creator has endowed the human organism with a preservative principle—the *vis medicatrix naturæ*, whose function is to resist the conflicting influences that tend to the decay and death of all organised matter. Hence when anything disturbs the normal operations of our organism by which healthful vitality is maintained, that preservative principle becomes active to correct such aberrations, and re-establish normal action. Thus, we arrive at a second great truth—that disease in its first or incipient stage is nothing more than ***an excess of healthy action by the preservative principle to resist some disturbing cause.*** As Cabanis, an able writer on the revolutions of medicine, observes :—

> "Whenever any derangement of regular functions exist, without *destroying the re-active energies inherent in nature* (the *vis medicatrix naturæ*), a fresh series of efforts, the object of which is *the restoration of regular action*, ensues. *These efforts do not properly constitute disease ;* since they are destined to combat it; yet *this term is given* to the phenomena they produce."—*Rapport's du physique et du moral de l'homme*, 7 mem., 10 chap.

Thus, the great truth proclaimed by Hippocrates two thousand two hundred and odd years ago, and which was revived and re-proclaimed by Sydenham, "the English Hippocrates," some two hundred years ago, and which is now taught by all eminent scientific Pathologists—that primarily ***disease is a remedial effort of Nature***, constitutes the only rational and solid foundation on which a natural system of therapeutics can possibly rest. Yet, unfortunately, the Physic-School practically reject this saving truth, and pertinaciously refuse to see or acknowledge the presence of Nature in disease. As Dr. Dickson remarks :—

> "No wonder that the world should be so long kept in darkness on medicine and its mode of action—no wonder that even educated persons should still know so little of the proper study of mankind—*Man !* In the throes of disease the early priests imagined they detected the workings of demons. Medical theorists, on the contrary, attribute them to morbid ingredients in the blood or bowels. One age bowed the knee to an *acrimony*, or *putridity ;* another acknowledged no cause but a *crudity*, an *acidity*, or a *humour*. The moderns hold that a mysterious process, which they term *inflammation*, is the head and front of all offending. How absurd each and all of these doctrines will appear in the sequel. Disease, gentlemen, is neither a devil to be 'cast out,' an acrimony or crudity to be expelled, nor any fanciful chemical goblin to be chemically neutralised. . . *Disease is an error of action*—a greater or less variation in the motion,

rest, and revolutions of the different parts of the body—reducible, like the revolutions of Health, into a systematic series of periodic alternations."—*Fallacies of the Faculty*, lect. i.

Correctly understanding what disease is, and knowing Nature acts to preserve the integrity of her own organism, the only legitimate office of the Physician is at once clearly and positively defined as that of *the servant and interpreter of Nature*, as Bacon so properly described it. But to magnify their own importance and augment their influence, Physicians, from the earliest ages, have encouraged mischievous delusions respecting disease, and their capacity and power to "cure" it, until a credulous belief in their charlatan art has become a popular superstition, transmitted through generations of dupes and victims. It is thus quite true of the present generation to say, that—

> "In relation to disease, and *the true principles and means of cure*, the most universal and lamentable ignorance prevails among mankind. . . They regard diseases as substances or things which enter their bodies with so little connexion with their own voluntary actions and habits, that nothing which they can do can prevent disease, nor vary the time nor violence of the attack.
>
> "People generally consult their Physicians as those who are skilful to prescribe remedies that will *kill disease*. . . Many, indeed, seem to think that their physicians can *take disease out of them* and *put health into them*, by the direct application of remedies, and that there is *in the remedies themselves*, when skilfully chosen and applied, a health-giving potency which, of its own intrinsic virtue, directly and immediately imparts health to the body.
>
> "This erroneous notion, as a matter of course, leads people to place their dependence on the sovereign virtue of remedies, and, consequently to undervalue the highest qualifications of the well-educated and truly scientific physician. . . The result of all this error is, in the first place, mankind do not believe that their own dietetic and other voluntary habits and actions have much, if anything, to do with the preservation of health and the prevention of disease; in the second place, when diseased, they expect to be cured by the sovereign power of medicine alone; in the third place, relying wholly on the intrinsic virtues of medicine, they are ever ready to run after those who are loudest and most confident in their pretensions, and this opens the door for *unbounded empiricism and quackery*, and for the immense evils which flow from blind and indiscriminate drugging."—*Science of Human Life*, pars. 1056–7.

Such a state of things is, no doubt, primarily referable to public ignorance; for people educated in the laws of life and health could not become the dupes and victims of physic-mongers; but the unconscientiousness of medical practitioners, who trade on the credulities of patients, has also much to answer for. The pretensions of these men, with respect to disease, and their false principles, whether believed in or not, fosters drug-empiricism, and perpetuates erroneous notions of Nature's economy. Of such pretenders to science and skill it has been said:—

> "A greater than they created man, and ordained the laws of his being, and no surer road (for prevention and cure of disease) can be found than *that traced by the Creator.* Overlooking this truth, and viewing disease as an entity ungoverned by any definite laws, and not destined to run through any definite course, many medical men talk familiarly of their *curing* or *arresting disease,* as if they had any absolute control over the whole animal functions, and could alter their laws of action at pleasure. To my mind, no clearer proof of *presumption and philosophic ignorance* can be found than this usurpation of the functions of the Deity, and its results are often very unsatisfactory."—*On the Observation of Nature in the Treatment of Disease.* By Dr. A. Combe. *British and Foreign Medical Review,* vol. xxi., p. 504, &c.

We now see that disease, in its first or incipient stage, is an excess of normal or healthy action to resist some disturbing or morbific influence. Hence results abnormal action, or disease; and medical theorists still further complicate and obscure the subject, by confounding the causes which conduce to an excess of normal action, with the varied phenomena that is exhibited *after* abnormal action has been established. The causes which conduce to an excess of normal action, or disease in its incipient stage—"accidental injuries" excluded—are referable to individual habits, or to constitutional peculiarities acted on by them, or to some insalubrious influence. The conditions, or sustaining causes of health, are, says Dr. Edward Johnston—

> "*Proper* food, both as to quantity and quality; pure air; *proper* drink; a *proper* amount of sleep; a *proper* amount of exercise of the voluntary functions; a *proper* mode of supporting the temperature on the surface of the body; and peace of mind."—*Practice of Hydropathy,* p. 117.

The causes which conduce to disease are exactly the reverse of these conditions, and whenever any are operative, a disturbance takes place, as we have shown, in the regularity with which the vital organism performs its functions; *mal-Nutrition* follows, and produces a general feeling of discomfort, *malaise*, and, a continuance of the disturbed state of the functions which regulate Nutrition, finally eventuates in producing *local* derangement of one kind or other.

Now the causes which conduce to disease all operate in *one* way, all produce one result—disturbed or deranged Nutrition, and all, if not at once corrected, eventuate in *one* effect—localised disease. Hence the truth of Dr. James Wilson's remark that, "Disease is *one* in its ultimate nature and material conditions."

But although there is this *unity* in Disease, the phenomena by which its localization is deservable—the outward manifestations of its inward existence—the symptoms by which its presence is made known, do exhibit a very multiplied variety, and the most prolific source of error in medical practice arises from *mistaking the symptomatic phenomena of Disease for the causes that produce them.* These symptoms which are necessarily as variable as their causes, and as the individual organisms which exhibit them are numerous and different, are seized upon by fanciful Nosologists who, noting their capricious distinctions, call them *separate diseases*—give them mysterious names—arrange them in classes, divide sub-divide, and arbitrarily manipulate them until they people the world with an incomprehensible number of—

> "Diseases dire. . . .
> . . . all maladies
> Of ghastly spasm, or racking torture, qualms
> Of heart-sick agony, all feverish kinds,
> Convulsions, epilepsies, fierce catarrhs,
> Intestine stone and ulcer, colic pangs,
> Demoniac phrensy, moping melancholy,
> And moon-struck madness, pining atrophy,
> Marasmus, and wide-wasting pestilence,
> Dropsies and asthmas, and joint-racking rheums."

The pretentious verbiage in which Nosologists delight to indulge might be harmless enough, were it not the source of many of the Drug evils under which humanity suffers. The manufacturing of diseases by needless artificial distinctions, giving names to symptoms differing only in shades, such as "acute" and "sub-acute," has the effect of leading to the manufacturing of a multitude of corresponding alleged remedies. A specific must be found for every form and shade of disease—a particular Drug, or combination of Drugs, assumed to be endowed with a special affinity to correct the aberrations of particular organs. Hence the multiplication of Drug remedies follows as a matter of course on the multiplication of diseases, and a "fearful Polypharmacy" reigns in consequence, sending its thousands of hapless victims to premature graves.

Hence, too, the variety of Drug preparations that obtain celebrity for one and the same so called disease, for as individual constitutions vary, so will the ability to resist and throw off Drug poisons lead to the manifestation of varied phenomena, and it is thus found that what is comparatively harmless to one patient becomes the cause of protracted suffering or death to another—then doubts arise, the famous remedy is distrusted, and finally sinks into discredit. Meantime new experiments lead to the blowing of new bubbles destined to float for awhile, then burst and vanish like all their predecessors. But what of that—the system is kept up flourishingly all the while!

The greatest evil, however, that arises from this ponderous unphilosophical Nosology is the most deadly error in Medical practice of *overlooking the true source of disease, and treating only symptomatic phenomena,* which is like the saving wisdom of commencing to sweep a chimney when the house is on fire. Yet this is *ordinary* Medical practice, and the result of such ignorant treatment is, that diseases easily curable in the first instance, are nursed into chronic growth, and life too often becomes a wearisome iteration of intensified suffering. "The whole affair of medical nomenclature and classification," remarks Dr. James Wilson, "is as *uncouth* and *barbarous* as it is *false,* *frivolous*, and often *vexatious*. They are of not the least practical importance." And Dr. Dickson says:—

> "In the great majority of instances, the local disorder *from* which Physicians now almost invariably name disease, and to which they almost *as invariably confine their attention*, is only one of many features of universal disturbance. So far from being the *cause* of such disturbance, the local tendencies to disorganization are merely hereditary or accidental developments occurring in its course—developments expressive, for the most part, of the weak points of individual constitutions, though sometimes determined by climate or other speciality of cause."—*Fallacies of the Faculty*, lect. v.

Disease is naturally divisible into two distinct classes only, both of which, however, have the one origin. *Organic Disease*, or structural imperfections in some of the organs by which the functions of life are carried on, is properly distinguishable from the derangements that may occur in the performance of those functions. All defective structure, however, whither congenital or taking place after birth, is solely referable to *mal-Nutrition* in one form or other.

*Functional disease*, or derangement in the working capacity of any organ by which it is unable to perform its own special duties, and consequently causes more or less disturbance to the whole economy, is quite consistent with perfect organism. Just as a steam-engine may be perfect in all its parts, yet unable to perform the work required, owing to a defective supply of fuel, so all the organs of life may be perfect, and yet derangements occur owing to causes that impede, pervert, or curtail *Nutrient supply*.

These are the great leading features of all disease, based on their natural division into Organic and Functional, to distinguish which by a simple nomenclature and classification is no doubt useful for practical purposes; but the mischief of the complex over-loaded, capricious Nosology now in vogue is, that it substitutes *names* for *things*. Its unsubstantial distinctions are perplexingly minute and ridiculous. The student's mind is carried away from the great source of all disease to dwell upon a senseless, soulless verbiage—he is taught to regard the mere phenomena of disease, to treat symptoms, overlooking sources, while, to screen ignorance, his mind is stored with an unintelligible jargon of empty phrases; and, thus furnished, is sent into the world "duly qualified" to become more of a missionary of death, than the "servant and interpeter of Nature."

> "Trammell'd and bound in custom's changeless school,
> Absurd by system, frivolous by rule,"

he fills patients with "pharmaceutical filth," and under one delusive pretext or other, drugs them with disease, and, above all, he keeps them in ignorance—because ignorant himself, let it be hoped—of those plain and simple laws of life and health, by the observance of which nine-tenths of the disordered phenomena that are magnified into serious disease, are susceptible of correction without any drugging at all.

The view thus taken respecting the primary source and nature of disease, is that which is now sanctioned by the most eminent pathologists of the day—foremost among whom is Erasmus Wilson, who has written so ably on the organism and functions of the skin, and on the properties of the Bath to influence and control—*as no other agency can*—the sources of disease. In a paper read before the Harveian Society, London, April 2, 1868, he attributes disease in general to a lowered state of *vital* power,—this lowness constituting a *causa morbi*, which, if allowed to continue, may give rise in twenty individuals to twenty different diseases, or, in the same individual, by attacking or affecting different organs, to a series of diseases.

Now, a lowness or deficiency of *vital power* is only another way of expressing the primary result of *mal-Nutrition*, from whatever cause arising; for we have seen that what feeds and sustains, gives strength, tone, and vigour to vital power, by which the individual constitution when exposed to morbific influences is enabled to resist them, is the perfect action of the Nutritive functions. Impair them, and vitality is impaired—is lowered and depressed through defective Nutrition.

It follows, therefore, that as vital power is impaired and depressed, so, proportionately, will the disposition be increased of the individual constitution to receive morbific impressions from external, endemic, epidemic, or other causes; and also the disposition to internal derangements from any excess that may unduly tax the vitality of the depressed condition.

And we repeat that the primary effect of a morbific impression on the individual constitution, is to call forth an excess of vital normal action to resist and remove it; and the disturbance thus created constitutes *general disease*. Should this state continue, through the inability of Nature to throw off the morbific taint and readjust the balance, then the tendency is, for the general disturbance to eventuate in *local disease*. "All local diseases," observes Dr. Edward Johnson, "with the exception of accidental injuries, some virulent poisons, and malformations, are only the *symptoms*, that is, the morbid results, of general disease."

For instance, in the individual constitution there may be pre-disposition to disease in some organ—some part weaker than another; and when one organ fails to perform its functions perfectly, it is a wise provision of Nature that other organs endeavour to supply the want. Thus, there is an undue amount of duty imposed on some one organ or organs, in the attempt to perform which they also may give way, and hence there is a constant tendency in general disease to localise itself, that is, to produce what are called *functional derangements* in the organism of the body, which constitute the great bulk of ordinary diseases. Such derangements consist in the non-performance of some organ or organs of the functions properly appertaining to it or them; and in the first instance, the disease thus manifested is termed *acute*, accompanied with more or less pain, and by mal-treatment the symptoms may be nursed into the stage termed *chronic*. As a rule, therefore, all chronic disease is caused by the mal-treatment of acute symptoms in the first instance, and hence the inevitable tendency of all Physic-practice is to create chronic disease.

But the general teaching of medical men on this subject would lead to the belief that disease is not a natural process, but a foreign something that has got into the body to thwart, injure, and pervert the healthy action of its organs—a something that has no relation to the actions of those organs, but a malign intruder that is to be killed or expelled. Thus, the famous Abernethy said:—"Nature is at war in the body with disease; *the physician steps in with a club and strikes.* If he strikes the first (Nature), the patient dies; if he strikes the second, the patient survives." Very satisfactory truly, and, with the bulk of practitioners and the public generally, this sort of thing passes for very profound medical science!

In this figurative and foolish sentence we have two entities set up—Nature and Disease—the latter of which the physician is to knock on the head with his club! But the slightest consideration will show that to knock what is called disease on the head is to knock Nature on the head, and thus kill the patient. All the processes of our organism are complex—there is a reciprocal dependence established between them, in the concurrent harmonious existence and working of which we have health. Whenever any of these processes are imperfectly performed, a change ensues in all the other processes to a greater or lesser extent, and the state termed disease supervenes.

For example, the digestive process involves several distinct secretions for which there are distinct and separate organs provided, and by their combined perfect action the complex process of healthy digestion is performed. But when, from whatever cause, any of these organs fails in its duty—when the gastric secretion, for instance, is defective, there is a reaction on all the other secretions, and the digestive process becomes impaired. The derangement of this process effects others, the blood becomes impure, the whole circulation is involved, and the disturbed state thus produced is distinguished as disease.

But observe the disease does *not* consist in the conditions or the results of this disordered action, nor is it the product of any *new* entity in the system; it is nothing more than the *altered action* of the very same organs which are employed in health, and, therefore, to knock them on the head, would be to knock Nature on the head and kill the patient—a feat of physic science and skill which, we admit, is rather too frequently performed.

The great truth to be borne in mind is, that Nature works in disease equally as in health—the product of the perfect working of our organism is *health:* the product of the imperfect working of the same organism is *disease.* But medical men talk and write as if Nature was only present in health, and that something else they consider unnatural and malign was present in disease. Thus "much error has arisen from the want of precision in the use of medical terms. And this is not a mere quibble about words. It is a matter of deep practical importance. For remedies are supposed to be given to cure disease. But the term disease being perpetually applied to *designate diseased conditions*, which are, in fact, only the symptoms of *some other diseased condition;* it has thus come to pass that remedies are perpetually administered to cure mere symptoms, leaving the disease, which produced those symptoms, *altogether overlooked and unmolested.* No wonder such remedies should fail."—*Principles of Hydropathy*, p. 54.

We thus conclude that disease is not a thing in the human body that is to be killed by Abernethey clubs or physic poisons; or to be let out by bleeding; or expelled by purgatives; or soothed into nothingness by opiates; or charmed away by any device of Pharmacy; but that it has its primary source in disturbed, imperfect, or perverted Nutrition, by which the processes that constitute health are interrupted; and that in its incipient stage it is nothing more than a remedial effort on the part of Nature to preserve the integrity of her own organism, and only becomes established and localised through the inability of Nature, from some cause or other, to accomplish that purpose.

It is by acting on this scientific conception of disease that Hydropathic practice is so natural and so successful. Its grand principle is *principiis obsta*—assist Nature to instantly nip the evil in the bud; and this *one* pack, or, better still, *one* Bath, may accomplish, by subduing general disease and restoring the normal action of a deranged function, thus averting localised disease and protracted suffering. Whereas under physic treatment the chances always are that the evils of general disease will be increased, intensified, and localised. Because the certain tendency of such practice is for mere *functional* derangements to be drugged into *organic* disease, *as they often are!*—for *acute* symptoms to be drugged into *chronic* disease, *as they often are!*—while the drugs swallowed may cause *new* and more frightful forms of disease, as in the next Chapter we shall show, they *very often do!*

The source and nature of disease being thus rationally and scientifically understood, the reader is in a position to consider more particularly the appropriateness of the remedies employed by Physic Doctors as curative or palliative in its treatment.

## CHAPTER XII.

*The natural test of what can prove remedial in disease—Remedies must harmonise with Nature—Effects of Food and Drugs contrasted—Nature's operations in Disease—The true office of the enlightened Physician—Deceptive teaching of Drug Schools—Alleged change of type in disease—The theory that Disease forms part of the plan of Creation—Effects of Drugs in producing new forms of bodily derangements, distinguished as "Drug Diseases"—A list of some of them—Medical authorities respecting them—Suggestions by Sir John Forbes for the reform of Practical Therapeutics—The evidence concerning the use of Drugs in Disease summed up—Conclusions.*

IT is a fundamental law of man's economy that whatever does not aid the purposes of Nutrition must, when taken into the system, prove more or less injurious to it. The functions and purposes of Nutrition, as the sole sustainer of Life and Health, have been already described; and we have seen that the primary source of disease is *mal*-Nutrition. Nature has thus supplied an infallible test by which to try all things that may be proposed as remedial in disease—*they must be in harmony with the purposes of Nutrition*—they must aid and sustain Nutrition itself—they must conduce to its perfect existence and action, not derange and corrupt, thwart or pervert it.

Now, whatever does not assimilate with the human system, that is, whatever does not contribute to the purposes of perfect Nutrition—feeding and sustaining vitality—must necessarily be non-natural to the system, and more or less injurious. And for this obvious reason, that whatever is so introduced into the system the vital principle seeks forthwith to expel; but as its expulsion cannot be effected without an expenditure of *vital force*, consequently *a waste* of that force takes place, the inevitable effect of which is to leave the system in a *weaker* condition than it was in before.

Hence the sensations of exhaustive weariness and languor so sensibly experienced, according to the state of the system, after the active effects of Medicines have passed away, and the vitiated craving that supervenes for something to "stimulate" and "sustain." This is a reaction which must always follow, whenever an unnatural tax is imposed on vital energy by drugging or anything else. As Dr. Trall observes :—

> "In a strict sense, anything which is *not* food *is* poison. Drugs and medicines of all kinds, whether derived from the animal, mineral, or vegetable kingdom, are poisons, and nothing else. *Every chemical substance in the universe is a poison to the living organism.* So are many organic products, as tobacco, lobelia, henbane, opium, etc. All of the acid, alkaline, earthy, and mineral ingredients—sulphur, iron, iodine, etc.—which are found in medicinal springs—are so many poisons. The rule to determine whether a substance has a normal or abnormal relation to the living organism—*whether it is a food or a poison*—is simply this: If it is *usable* in the normal processes—if it is convertible into tissue—it is food; if not, it is abnormal and poisonous."—*Water Cure*, etc., p. 41.

By contrasting the effects of *Food* on the human system and of *Drugs*, the laws of our economy, in this respect, will be more clearly illustrated.

Food, as already explained, when taken into the stomach is converted by the digestive process into *chyme*, which then passes from the stomach into the intestinal portion of the alimentary canal, and becomes *chyle*, by the complete separation of the nutritious from the excrementitious portions. Further chemical and vitalising changes then take place, by which the *chyle*, in its passage to the heart, is converted into *blood*, which, after being subjected to the purifying process of the lung circulation, becomes pure arterial blood, and enters upon its grand duty of conveying healthy nutritive particles to feed and sustain every tissue and part of the human body—becoming, as Carpenter says, "the *pabulum vitæ* for the whole system." Here, then, we have *Food* performing its natural part in healthy Nutrition —feeding, sustaining, and invigorating *Vital Power*, not exhausting and wasting it, or corrupting its sources.

Contrast with this, the effects that follow the swallowing of such every-day Medicine as simple *purgative* preparations to relieve ordinary constipation. The almost universal belief is, that purgatives, when swallowed, pass directly from the stomach into the bowels, and, sweeping all before them, thus effect the desired purpose. But *this is not their effect, nor anything like the process that takes place*—it is, however, one of the many popular and fatal delusions which encircle the whole subject of Medicine. To be followed by the effects desired, purgatives must *first mingle with the blood, and poison it more or less*, because all soluble substances whatever, when introduced into the stomach, are taken up by the absorbents and veins at once into the blood. As that able physiologist, Sylvester Graham, observes:—"When indigestible substances"—that is, non-nutritious substances—"are received into the stomach in aqueous solution, they are absorbed with the water, and pass into the vital domain with no apparent change." But besides poisoning the blood—"the *pabulum vitæ* for the whole system," the other deleterious effects that follow are thus correctly and graphically described by Dr. Edward Johnson:—

> "By introducing first into the stomach, and, through it, into the blood, certain acrid and irritating substances called *purgatives*, the stomach, which was healthy before, *is now nauseated, its lining membrane inflamed, its nerves irritated, and its functions disturbed.* Its peace and quiet, if I may so speak, is interrupted and broken. From the stomach the irritating substance passes by absorption directly into the blood. Mingled with the blood it is circulated through all the organs—*through the heart, through the lungs, through the brain—which it irritates in their turn*; till presently that remarkable power called the conservative principle, and which is ever on the watch to preserve the living machine from injury, takes the alarm, and a violent effort is made to free the blood from its poisonous presence; and its expulsion is finally effected through the bowels."—*Practice of Hydropathy*, p. 80.

Thus, one of the most palpable effects of introducing purgatives into the system is a general disturbance of the functions of nutrition, and a consequent waste of vitality in effecting their expulsion. And this is equally true of all drugs—of all indigestible, non-nutritious substances that do not assimilate with the human system—that do not contribute to the formation of healthy blood as food does.

But it may be said that, by the ultimate evacuation of the bowels, the purgatives effected the desired purpose, and, therefore, that drugging is a good process—a salutary system. A non-sequitur like this, that violates logical induction and outrages common-sense, cannot pass current outside medical schools. That such effects on the bowels do generally follow from the swallowing of purgatives may be assumed, but suppose the same effects could be always confidently calculated on, *which they cannot*—suppose there was a positive certainty that the same purgatives and doses would invariably produce the same results, *which there is not*—suppose that constipation could be cured by one, two, a dozen, or ten dozen doses of all or any of the purgatives in the Pharmacopœia, *which it cannot*—and suppose no other *natural and safe way* of effectually curing constipation was known, then, indeed, were these suppositions tenable, the question might arise whether so large an amount of mischief to the system, as purgatives are always certain to produce, might not be compensated for by the removal of constipation.

This question, however, never can arise, for constipation never was, nor never will be, cured by purgatives, or any medicine whatever. To perpetuate the pernicious notion that any inherent remedial virtue resides in any drug substance, is one of the most deadly vices of medical teaching and practice. If there was a scintilla of truth in a theory so demonstrably false, is it not self-evident that the assumed virtue would necessarily be equally active, *cœteris paribus*, in all circumstances of time, place, and individual? The food that nourishes to-day will, *cœteris paribus*, nourish to-morrow, and be equally applicable to every human being. But is this the case with Drugs, notwithstanding all their assumed inherent virtues? Are they always followed by the same effects in the same individual? Notoriously not; while a dose that one man can swallow with impunity may go a long way towards killing another. The same food will, *cæteris paribus*, produce the same effect on the same individual all the year round—aye, for his life-time—satisfy hunger and nourish his system. But even Physic-Doctors admit that drug-substances possess no such uniformity of effect, which they should possess if they had any of the inherent virtues ascribed to them. But, on the contrary, after swallowing any given purgative for a time its assumed virtues fade away and vanish—a gradual increase of dose takes place, or other more potent substances are substituted. And this proves the destructive character of drugging on the human system; for it is wisely provided that by swallowing drugs which unduly excite nervous action, and are alien to the healthy economy of life, nervous sensibility to their presence becomes blunted, *i.e.*, paralysed, so that increased quantities must be taken to excite the required disturbance, and this is called the "law of tolerance."

To imagine that any knowledge or skill possessed by any physician, or that he could possibly acquire by the most profound learning and the most matured experience, could confer on him the power of making any drug perform any natural function of the living body, or correct any derangement, or cure any disease, is as preposterous a supposition—as pernicious a delusion as any rational mind could harbour. It betokens the grossest ignorance of the human organisation—of the very A B C of physiology. Nevertheless it is a delusion that medical schools ardently foster and encourage—that Physic-practice is designed to perpetuate, and a blind belief in which is the basis of its practice.

All the organs of the living body have separate and distinct functions to perform: those engaged in Nutrition especially so, as on them the healthy vitality of the whole is dependent. Now, no human power or skill can do the work of any of these organs, or by any means supply any deficiency on their part, and this physiological truth is a complete refutation of all medical theories that have been framed to countenance and sustain drug-practices. It is set forth with admirable clearness by the great American physiologist as follows:—

"Pure, healthy arterial blood can only be produced by the healthy functions of the lacteals, lungs, and other organs concerned in hæmatosis, or the formation of blood. Perfectly healthy bile can only be produced by the healthy function of the liver; and so on of all the other fluids and humours of the whole system. Now, then, suppose the chyme or chyle, or blood or bile, or any other fluid or any other humour of the body, to be unhealthy and impure, *is it possible* for any physician, or any other human being in the universe, to apply such a remedy as will, of its own intrinsic virtues, directly and immediately impart health and purity to any of those substances? *Most certainly not!*

"There is no possible way in nature of producing these effects, but *by the healthy functions of the organs constituted for that purpose.* If the bile is unhealthy, *no medicine in the universe can directly impart health to it.* The healthy function of the liver alone can make the bile healthy; and while the function of the liver is perfectly healthy, the bile cannot be unhealthy. If the blood is impure, no medicine in the world can, by its own intrinsic virtues, directly impart purity to it. There is no possible way in nature by which it can be purified, but by the healthy function of the appropriate organs of the body.

"We see, therefore, that the essential elements of health are the healthy condition and functions of the organs of the human body. . . . No physician, nor any other human being, can come to us when we are diseased, and by any exercise of skill, or the application of *any remedy*, directly and immediately *impart to us any health*, or *remove from us any disease*. But the truly enlightened, scientific, and skilful physician is generally able to discover the nature of our disease, and to ascertain what disturbing causes must be removed, and what means must be employed in order to the restoration of the healthy action and condition of any organ and part, and thus, *by assisting Nature's own renovating and healing economy*, relieve the system from disease, and enable it to return to health."—*Science of Human Life*, pars. 1063–5–6.

This is sound physiology, as all eminent scientific authorities concur in teaching; but is it consistent with the theories of Drug Schools, or with the pretensions and the prescriptions of drug practitioners? Is not medical practice based on the alleged "special affinities" of certain drugs for different portions of the human body, over which they are assumed to exert a special remedial power? What is the staple of all the bulky volumes that have appeared on the "Practice of Medicine," and what fills the pages of medical journals but assertions and speculations concerning the alleged special aptitudes inherent in drugs to grapple with and overcome specified diseased bodily conditions? And yét, with all this assumed confidence in practice and in teaching, drug action is an acknowledged mystery to the profession, and even learned professors find it expedient to envelope their ignorance in technical obscurities:—

> "If you ask a teacher of Medicine why opium sets you to sleep, his answer will be—From its *Narcotic* power. What can be more satisfactory? Nineteen out of twenty students at least, are satisfied with it—they are delighted when told in Greek that it does set them to sleep! Why does rhubarb purge? 'From its *Cathartic* power,' you will be told; what does that mean?—simply, that it purges. Again you demand—How does antimony vomit?—again you get the Greek reply—'From its *Emetic* power;' in plain English, it vomits! Such is the mode in which the schoolmen juggle; instead of an answer, they give you an echo! Had these logomachists—these word-mongers—been as well acquainted with the motions of *living* things as with the inflections of *dead* languages, they would long ago have preferred reasoning to mystification."—*Fallacies of the Faculty*, lect. ix.

While, however, the mysticism of teachers and the empiricism of practitioners harmonise pretty well together, and medical practices have become almost as changeable as the "fashions"—coming in and going out with no more apparent reason for going out, than there was for their coming in—the total uncertainty that is the invariable attendant on *all* drug practice, save as regards suffering and death, is becoming more notorious every day, and this is best attested by the undoubted progress Hydropathic Medicine is making in public confidence.

Sufficient evidence has been adduced to prove, that the most learned and accomplished members of the medical profession have the least faith in its accredited theories, while they are the most distrustful of its practices. But, then, there are ingenious minds who, freely admitting the errors, uncertainties, and unsatisfactory results of both teaching and practice, yet have framed a theory by which the whole opprobrium is cast on Nature! It is the fickleness of Nature, they allege, that is the cause of all our imperfections by having capriciously effected what they call "a change in the type of disease!"

This theory is gravely brought forward by Physic authorities to account for all the notorious imperfections in their art. Disease has changed, the human organisation has changed, and Nature is an inconstant jade! It is strange that even writers on Physic could be found to indulge in such self-convicting folly. We never hear from the professors of scientific Hydropathy any such ridiculous complaints against Nature. They find no change in the human constitution, in its relation to abnormal conditions, to baffle their practice. Disease is still to them what it ever was—the same as to Hippocrates nearly three thousand years ago; and in its nature or effects there is no "change of type," while, as "the servants and interpreters of Nature," they labour in harmony with Nature's laws more successfully than ever. This grave cant, then, about a "change of type" is but a sorry subterfuge to screen the delinquencies of Physic, and throw a plausible covering over its acknowledged impotency.

There is more novelty and boldness in another theory that has been promulgated by a Dr. Cotting, in a work entitled *Disease a part of the plan of Creation.* It must be a comfort to mankind under the torments of disease, and reconcile them to all the evils of Physic, to be told that the fault lies not with them, for that disease constitutes a part of the plan of creation! To have any rational meaning this must imply that the Creator made the human organisation so imperfect, that the necessary result of its action must be disease. This is an audacious implication of the Creator to palliate the errors of mankind, alike revolting to science and religion. The theory is physiologically false and contradictory of experience. "Disease is *never* the legitimate result of the normal operation of any of our organs. The natural and legitimate result of all the normal operations of our vital economy *is always health,* and *only health;* and if disease is induced, it is *always by causes which disturb* those operations."—*Science of Human Life,* par. 1,067. And these causes man is endowed with full power to avoid or avert.

The theory, however, that disease is a thing beyond man's control—an infliction he is pre-ordained by his organisation to endure, while it revives the old pagan notion that Hippocrates combatted, is an exceedingly convenient one for Drug Doctors to patronise. No one can reasonably impute to them any lack of zeal in not striving to realise its full import, and bestow upon mankind all its advantages; and if the gods who presided over the health of the pagan world do not smile on their endeavours, assuredly the dæmons who had the manufacturing of diseases have no reason to frown.

It is a fact on which the public cannot too seriously ponder, that, by the remorseless pursuit of their practices, Drug Doctors have succeeded in creating a multitude of new diseases, which they have themselves distinguished principally by the names of the different drugs that are instrumental in causing them. It is an undisputed fact, that Drugs, which are habitually and freely prescribed in ordinary cases of illness, are the causes of a multitude of the most serious diseases, which, among the profession, are known as *Drug Diseases.* "I am certain," says Dr. E. Johnson, "I speak *the literal, the simple, the unexaggerated truth, when I assert that thousands*—not hundreds—but *thousands of human beings are killed every year in Great Britain alone by Drug Medicines.*" There is nothing very novel in this practice, however; but let us look at the matter more in detail.

Dr. Pereira, one of the most eminent authorities, on Materia Medica, and in high estimation among the Drug School, says of Alkalies, which are in constant use, as *Potash, Soda, Ammonia, Magnesia,* that "by continued use they give rise to increased activity of the different secreting organs, and of the absorbing vessels and glands; effects which are analagous to those caused by mercury. After some time, the digestive function *becomes disordered, the appetite fails, the blood becomes thinner* and *darker colored,* and *loses its power of spontaneous coagulation* when drawn from the body; the whole system, and more particularly the digestive organs, *become enfeebled,* and a state precisely similar to that of *Scurvy is brought on.*" The disease thus produced is called *Alkaline Scurvy!* Yet the treatment of rheumatic fever by Alkalies is one of the subjects the Pharmaceutical Committee of the Harveian Society have set about now to investigate!

*Arsenic* in the most minute doses produces a disease which the same authority says medical practitioners "*occasionally mistake for English cholera!*"—or "infantile remittent, otherwise called *gastric fever.*" And he adds that the "mistake is *sometimes* attended with consequences equally fatal to the patient, and the reputation of the physician!" This pleasant disease figures in Medical Nosology as *Febris Arsenicalis.* Then there is another disease the same poison gives rise to, which is distinguished as *Arsenical Cephalites,* from the fact that there is great inflammation of the head and face. The glands of the jaw and face become enlarged, and in a case Dr. Pereira quotes from a French authority, Desgranges, "giddiness, fainting, burning sensation at the pit of the stomach, occasional vomiting, heat in micturition, constipation, trembling of the limbs, and delirium were also present."

*Iodine* is a drug most freely prescribed in its simple or uncombined state, in tinctures, or as it exists in many preparations, and the disease to which its use gives rise is called *Iodism.* According to Dr. Pereira, it is *a very dangerous medicine* for any one to take who is "disposed to dyspepsia," that is, *indigestion.* The characteristics of Iodism are declared by Dr. Coindet to be "violent vomiting and purging, with fever; intense thirst; palpitation of the heart; rapid and marked emaciation; cramps; small quick pulse; occasional dry cough; —*death!*" Dr. Thompson, Professor of Materia Medica in the London University, says of *Iodine:*—"Its primary influence is exerted upon the stomach, a fact which has been fully ascertained by the appearance observed on that organ in persons *who have been poisoned by it.*" And he adds, "Like other medicines *it accumulates in the system,* and, therefore, the continued employment of it, even in small doses, has occasionally (?) *proved hurtful.*"

*Mercury* has long been regarded by the profession as the king or queen of medicine—a *sovereign Drug* under whatever gender, and it has been called "the physician's sheet anchor." It is held to be a *sheet anchor* in fevers, says Professor B. F. Barker, M.D., of the New York Medical College, "but it is an anchor that *moors your patient to the grave!*" By its use alone hundreds upon hundreds of thousands have been slaughtered, and must necessarily continue to be slaughtered as long as its use is persevered in, while thousands upon thousands who, from one cause or other, it did not kill outright, have been disfigured and tormented for life by its disastrous effects on their system. The Pharmaceutical preparations in which this deadly poison constitutes the staple ingredient are very numerous, but that most commonly administered is known as *Calomel*, or the Chloride of Mercury. It matters not, however, in powder or pill, combined or sublimated, it destroys life rapidly, or by protracted agony, accordingly as it is administered, while it has the peculiar merit of being the prolific parent of a number of *new diseases*, the very enumeration of which it is horrible to contemplate:—

*Febris Erethica vel Salivosa.*—Inflammatory or salivary fever.

*Erethismus Mercurialis* —A fever characterised by prostration and depression. "The action of the heart will sometimes cease instantaneously, and death ensue."

*Mercuriale Enteritis.*—Mercurial inflammation of the bowels.

*Eczema Mercuriale.*—Mercurial skin disease.

*Mercurial Cachexia.*—"Characterised by irritable circulation; extreme pallor and emaciation; an acute and rapid hectic fever; and an almost invariable termination in phthisis," consumption.

*Tremor Mercurialis.*—From exposure to the vapours of mercury, inhaled or otherwise.

*Mercurial Stomatitus.*—A disease that ensues when salivation has been designedly effected, but cannot be subdued. Dr. Pereira states "a few grains of blue pill, administered for a liver complaint," brought it on in a female; and "in another instance, that of a child, four years old, it was produced by a few grains of calomel."

*Diarrhœa Mercurialis.*—Mercurial purging, or mercurial disease of the pancreas.

*Urorrhœa Mercurialis.*—A kind of mercurial diabetes, or rather diuresis.

*Hidrosis Mercurialis.*—Mercurial sweats.

*Miliaria Mercurialis.*—A form of mercurial skin disease.

*Angina Mercurialis.*—A mercurial inflammation and sloughing of the gullet.

*Ulcus Membranæ fibrosæ Mercuriale.*—The ulceration of fibrous membranes produced by mercury.

*Ulcus Glandulorum Mercuriale.*—A similar disease affecting the absorbent glands.

*Neuralgia Mercurialis.*—Neuralgia induced by mercury.

*Paralysis Mercurialis.*—Paralysis similarly caused.

*Apoplexia Mercurialis.*—Apoplexy similarly induced.

*Amaurosis Mercurialis.*—Dimness of sight or total blindness, similarly caused.

*Hypochondriasis Mercurialis.*—A morbid affection of the spirits, with dyspepsy, &c., induced by mercury, terminating often in lunacy or suicide.

It is possible Dr. Cotting may consider all those formidable diseases to have "constituted a part of the plan of the creation," but at all events, if Drug Practitioners never dosed victim patients with mercury, they never would have made their appearance in the world. Mercury is truly the *Devil's Drug*, and the United States Government has set a laudable example by prohibiting its use in the Army and Navy Medical departments. There is no calculating its effects on the system. "Mercurial preparations," says Dr. Thompson," whether chlorides, cyanides, or iodides, are decomposed, and the mercury, in a metallic form, is either thrown out of the body by the skin or lungs, or, under certain circumstances, *is deposited in the glands or bones.*" Because the tendency of Mercury is to produce fatal diseases, he says:—"On this account mercurials should be introduced into the system *gradually*, and the mildest forms of the preparations *first* employed!"—a slow death the Professor of Materia Medica thinks preferable to a rapid one!

But observe the logical inconsistency of this learned Professor. Mercury, he says, becomes decomposed, and in its metallic form, that is, as *quicksilver*, is deposited in the glands and bones, therefore it should be given *gradually*, and in the mildest forms *at first*. The object of this caution is to guard against some of its ostensibly poisonous effects. But then he also admits that, like Iodine, Mercury *accumulates in the system*, and *months*, nay *years*, may elapse before the fatal effects of this accumulation are fully experienced. Yet this being one of the terrible properties of Mercury, and because no *immediate* bad effects may appear, this astute Professor counsels practitioners to go on *gradually*, introducing it in the mildest forms *at first*—knowing perfectly well that in *any form* it is decomposed, and has a tendency to accumulate in the system. "Mercury, when administered in any form," says Professor Carr, M.D., of the New York University Medical School, "is taken into the circulation, and carried to every tissue of the body. The effects of Mercury are not for a day; but *for all time*. It often *lodges in the bones*, occasionally causing pain *years after it is* administered. I have often detected metallic Mercury in the bones of patients who had been treated with this subtile *poisonous agent*."

"We find," says Dr. Inman, "that a drug will do mischief *long after* its introduction into the system, and its succeeding *expulsion*. For example: *Calomel* may sometimes, though very rarely, bring about caries of the bones of the lower jaw, *long after* the drug has been eliminated; and *Lead* will produce *wrist drop*, although we are unable to demonstrate its presence in the muscles of the fore arm."—*Medical Mirror*, June, 1868. There are a multitude of authorities all concurring in declaring the danger of administering *Mercury* in any form, and poisonous substances generally. But *Mercury* is perhaps the most insidious in its action of them all *in any form, or in any dose*, for no human sagacity can alter its poisonous properties, or guard against its tendency to accumulate in the system, and prove ruinous to health and life.

We have seen what Professor Barker's opinion is of Mercury as a "sheet anchor" in fevers. The late Dr. Graves, of Dublin, than whom there could not be a more esteemed authority, says, "I have seen a person labouring under mercurial irritation, seized with *common Fever*, which afterwards became *Typhus*, and proved fatal in five days. Still you will hear persons say, that if you get a fever-patient under the influence of Mercury, you will *cure* the disease, and that mercurial irritation will protect a man against fever. I have known Jaundice to appear during a course of Mercury."

"Mercury is supposed to be useful," says Dr. Dickson, "in fevers, iritis, erysipelas, dysentery, rheumatism, cutaneous, osseous and glandular disturbances. To the records of the profession I appeal for testimony to the truth of my statement, that it has too frequently *produced those very maladies in all and every of their forms and varieties.*" Again, he says—"this substance has recently become *one of the chief agents in man's destruction.* You daily see men—men who never reflect upon the effect of any medicine—prescribing four, five, and six grains of calomel to children—to infants! Can you wonder at *the frightful number of deaths* that take place *under seven years of age?*"

There is no doubt that physicians, often from ignorance of the effects produced by drugs, more especially by preparations of mercury, are unconsciously the cause of inducing disease and death. Dr. Trall remarks—

> "It is not generally known, and very few physicians seem to be aware of the fact, that calomel, when taken into the system, is very liable to be converted into *corrosive sublimate.*
>
> "In this way, an *ordinary* dose of calomel may produce *fatal effects.* Thousands *are killed in this way,* neither patient nor physician suspecting the cause of death. There are many substances in the system, resulting from the continual changes of the organic elements, which are capable of thus converting *a mild preparation of mercury into one of the intensest poisons known.*
>
> "Free chlorine will do this, and this is readily furnished by common salt. No person, therefore, who uses salt as a dietetic article, and who takes mercury *in any form,* can have any assurance that corrosive sublimate will not destroy his life.

> "Many persons have been severely salivated, and others have died very suddenly and mysteriously, soon after taking very small doses of calomel, blue pill, and other *mild* preparations of mercury. I respectfully commend these facts to the serious attention of the mercurial doctors, and to the solemn reflections of their patients."—*Water Cure, &c.*, p. 41.

In the same way *nitrate of silver*, which is frequently administered as a tonic, combines with salt, and forms, says Professor Thompson, "an inert chloride of silver in the stomach." But it must not be supposed, as Dr. E. Johnson remarks, that "all the mischief is done by such Drugs only as are known to be poisonous. Many of those which are generally thought to be of a very simple and innocent nature are highly deleterious, in a great variety of ways. Some of them spoil the blood. They literally alter the constitution, and destroy the qualities of this vital and all-important fluid." For instance, *Quinine*, one of the most vaunted specifics in the whole Pharmacopæia, gives rise to a peculiar febrile attack, which the workmen employed in its pulverization call "Quinine Fever" (China Fieber), and is so painful that many have to leave their employment on that account. Dr. Inman, in *Medical Mirror*, June, 1868, says, "Quinine has been known to produce permanent deafness, and it is a common effect that follows the administration of the very simplest drugs, or such as are generally considered so, that the symptoms for which they were administered disappear, but new evils arise. Thus drugs are said to "cure" one disease by setting up another!"

Physic practitioners, however, are not to be reasoned with on this subject, and few patients can be brought to look at the matter in its true light. With reference to the stolid bigotry with which the adherents of the Drug School resist reason, and persevere in practice so detrimental to health and life, Dr. Johnson observes—"It is very sad to contemplate this state of things. To see with one's bodily eyes its baneful effects in perpetual operation all around is sadder still. To mark the apathy of medical men in general with regard to it—the pertinacity with which they cling to it—the hostility with which they treat all attempts to improve it—is by far, by very far, most sad of all!"

Dr. Inman, of the Liverpool Infirmary, declares that, after a close examination of the statistics of Homœopathy, it became clear to his mind "that the old system of Medicine had done *positive harm to every one who had indulged in it;* and that on striking a sort of debtor and creditor balance in favour of and against doctoring, it appeared that the world, in the main, *would have been better without physicians than with them. Antimony* has killed its thousands, and *Mercury* its tens of thousands." And with respect to Drug practice laying the foundations of future disease, he says:—

> "When I was a student in London thirty years ago, a man with rheumatic fever was bled once, twice, or three times; was kept upon low diet; occasionally purged; and *when the heart became affected*—which it did in five cases out of six—*mercury* was employed, and the patient was salivated, whilst *more blood* was taken from the chest by cupping. The disease so rarely ever ran a course of less than six weeks, that the Professor of Medicine told us that he did not believe any case to be one of true rheumatic fever that got well in a less period; the ordinary duration of the illness was three months. The patients generally left the hospital *with some affection of the heart,* and were, as the same professor assured us, very likely, in two years, to come into the institution again *to die of dropsy.*"—*Medical Mirror*, April, 1868.

As a rule, all Drug practice tends to the injury of the patient; and no matter how good a man's constitution may be, he has no assurance—no certainty, that when drugged in the mildest form, and for the simplest ailment, the seeds of future disease are not being sown in his system. So far, indeed, from having any reasonable certainty of thus escaping injury, he has the most positive assurance science and experience can give, that his constitution cannot be benefitted, however much it may be injured. Just reflect on the following evidence respecting disease consequential on drugging.

From a paper read by Dr. Dickenson before the London Medical and Chirurgical Society, giving the results of cases treated in St. George's Hospital during five years ending December

31, 1861, we learn that there were no less than *fourteen different modes of treatment* practised by the Physicians of that Hospital for one and the same disease—Acute Rheumatism! Dr. Dickenson's paper is entitled "The Treatment of Acute Rheumatism, considered with regard to the liability to *affections of the heart* under different *remedies!*" Some of the most "heroic" of these so-called remedies produced disease in the hearts of patients who were certified as totally *unaffected with any disease of the heart before* the treatment commenced. —Thus

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|---|---|---|---|---|---|
| Bleeding | produced | heart disease | in every | 2nd | patient. |
| Opium | " | " | " | 3rd | " |
| Salts of Potash and Soda | | | " | 3-16th | " |
| Mercury | " | " | " | 4th | " |
| Nitre | " | " | " | 10th | " |
| Alkalies | " | " | " | 48th | " |

Thus, according to the "heroic" activity of the treatment, so was heart disease propagated! And these are the remedies doctors employ to *cure* disease! This is the happy result of their scientific and enlightened principles of practice! Besides, there is no knowing to what fearful extent drugging is productive of new forms of disease; for, as Dr. Bigarel observes—

"The consequences of popular mismedication are far-reaching and peculiarly unfortunate. We see them in every phase and condition of life. They meet us on every hand. The land is full of invalids vainly seeking lost health and vitality in those things which can but aggravate their ailments. Banish drug medication from the land, and we shall rid ourselves of a prolific source of debility and disease, and instead of running after doctors for specifics for physiological transgressions, the people will fall back upon their own native resources of common sense. One has truly remarked that if we were to '*banish all medical books and medical teaching from the earth, humanity would be vastly the gainer by it.*'

"The diseases consequent on the administration of drugs *are so numerous and complicated* as to preclude any attempt to describe and illustrate them here. Thousands of cases, *originally simple*, have become complicated by a protracted course of druggery, which on the Hygienic plan would have been successful after *a few simple, mild applications.* Who can not see, that in a land where drug doctors rule, and every second person, almost, you meet has taken or is taking drug medicines in some form, that ill health and consequent debility *must largely prevail?* The only remedy for this source of debility is to remove drug medication."—New York *Herald of Health*, vol. 6, p. 159. *New series.*

But some doctors do learn, by fatal experience, to modify their murderous treatment, and have mercy on patients. In the discussion on Dr. Dickenson's paper, Dr. W. Gull said:—

"He had used colchicum, Dover's powder, nitrate of potash, opium, &c., *without satisfactory results*, and was, therefore, content to keep the patient *quietly in bed*, so as to avoid disturbing causes, and to support him on the *simplest diet*—giving him a mixture to please and satisfy him, and lead him to believe that something was being done; and he usually gave him a little extract of taraxacum (dandelion), mixed with peppermint water. Amongst sixty-four cases so treated he had scarcely had a case of heart-disease."

When experience proves that patients get well more certainly and rapidly without drugs than with them, the "Medical Mirror," May, 1867, may well declare—"Our theories are laughed at as intricate pomposities, concocted to veneer the inability of our treatment!" But practice based on such theories is, after all, a very simple affair, and does not require a very high order of mind or of acquirements.

"To throw an immense quantity of medicine into the diseased body, and accidentally kill or cure, as the event may happen to be, requires," observes Sylvester Graham, "but little *science* or *skill;* and extensive experience has taught us that *it may be done as well by the acknowledged quack as by the licensed physician;* but to understand all the properties, powers, laws, and relations of the living body, so well as to be able to stand by it in the moment of disease, and, as it were, to look through it at a glance, and detect its morbid affections and actions, and ascertain its morbific causes, and to know how to guide and regulate the energies of life in accordance with its own laws, in such a manner as to remove obstructions, relieve oppressions, subdue diseased action, and restore health, with little or no medicine, but principally or entirely by a regimen wisely adapted to the case, evinces the most extensive and accurate professional science and the most profound skill; and *such qualifications are essential to the character of a truly enlightened* and philanthropic physician; and such physicians truly deserve the support and respect and admiration and love of every member of society, as standing among the highest benefactors of the human family."—*Science of Human Life,*[*] par. 1068.

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[*] This profound thinker has ably sketched the essential difference between the Drug and the Hydropathic Physicians, the one recklessly

But it is not the "truly enlightened and philanthropic physicians" who drug their confiding victims to death, and, with reckless want of conscientious thought, follow irrational practices based on theories that manifest a total unacquaintance with the laws of the human economy. The practitioners, however, who do so act, constitute, unfortunately, the great majority of the profession; they are the ordinary run of Physic-mongers who thrive by public credulity, and on whose unscrupulous pursuit of Medicine, *as a trade,* fortune too often smiles—elevates them into high places, seats them in professorial chairs, and rewards them with wealth, dignities, and the power of perpetuating the delusions by which they have prospered.

From what has now been said concerning the rationale of the system pursued by such practitioners, the cogency of the suggestions offered to the profession by Sir John Forbes, for the reform of practical therapeutics, can be fully appreciated. He suggests, among other things, and as cautiously as possible, that it might probably conduce to a decrease in the number of drug victims, if practitioners would only

> "Endeavour to banish from the treatment of acute and dangerous diseases, *at least,* the ancient axiom, *melius anceps remedium quam nullum,* and substitute in its place the safer and wiser dogma—that where we are not certain of an indication, we should give Nature the best chance of doing the work herself, *by leaving her operations undisturbed by those of art.*
>
> "To endeavour to substitute for the monstrous system of polypharmacy now universally prevalent, one that is, *at least,* vastly more simple, more intelligible, more agreeable, and, it may be hoped, one *more rational, more scientific, more certain,* and *more beneficial.*
>
> "To discountenance, as much as possible, and eschew the habitual use, without sufficient reason, of certain powerful medicines in large doses, in a multitude of different diseases, a practise now generally prevalent and fraught with the *most baneful consequences.* This is one of the besetting sins of English practice, and originates partly in false theory,

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throwing drugs into the diseased body careless of consequences, the other "the servant and interpreter of Nature;" yet, when he wrote, the Hydropathic system had not been developed, and he died in 1851, before *The Bath* had been revived. His *Science of Human Life* is a monument to his genius and philanthropy.

and partly in the desire to see manifest and strong effects resulting from the action of medicines. Mercury, iodine, colchicum, antimony, also purgatives in general and blood-letting, *are frightfully misused in this manner*.

"To encourage the administration of simple, feeble, or *altogether powerless*, non-purturbing medicines, in all cases in which drugs are prescribed *pro forma*, for the satisfaction of the patient's mind, and not with the view of producing any direct remedial effect.

"To make every effort not merely to destroy the prevalent system of giving a vast quantity and variety of *unnecessary* and *useless* drugs, *to say the least of them*, but to encourage extreme simplicity in the prescription of medicines that *seem* to be requisite.

"Our system is here *greatly and radically wrong*. Our officinal formulæ are already *most absurdly and mischievously complex*, and our fashion is *to double and redouble the existing complexities*. Nothing has a greater tendency to dissociate practical medicine from science, and to *stamp it as a trade*, than this system of *pharmaceutical artifice*. It takes some years of a student's life to learn *the very things which are to block up his path to future knowledge*. A very elegant prescriber is seldom a good physician. And no wonder. Tailors, barbers, and dancing-masters, however learned they may be in the externals of gentility, are not expected to be fine gentlemen or men of fashion!

"To endeavour to break through the routine habit, universally prevalent, of prescribing certain determinate remedies for certain determinate diseases or *symptoms of diseases*, merely because the prescriber *has been taught to do so*, and on no better grounds than *conventional tradition*.

"Even when the medicines so prescribed are innocuous, the routine proceeding impedes real knowledge by satisfying the mind, and thus producing inaction. When the drugs are potent, *the crime of mischief-making is superadded to the folly of empiricism*.

"To place in a more prominent point of view the great value and importance of what may be termed *the physiological, hygienic, or natural system of curing diseases, especially chronic diseases, in contradistinction to the pharmaceutical or empirical drug-plan generally prevalent*."—*British and Foreign Medical Review*, vol. xxi., p. 262, &c.

This last is the exact object of the present work, truly and pointly stated, and in endeavouring to accomplish which, we trust it may be in some measure successful.

The case against Drug Medication, as warranted by the evidence of Science and experience, may now be briefly summed up. The latter evidence indeed, has been supplied to us by men who were trained in Drug Schools, and spent the best years of their lives in the practice of the delusive systems that were taught them, and yet in the maturity of their experience they have cried aloud with Saul—"Behold! *I have played the fool, and have erred exceedingly!*"

Drugging is opposed to Nature, because perfect Nutrition being the sole basis of perfect health, whatever does not conduce to Nutrition—whatever is not in itself Nutritive, cannot be good for man.

Imperfect Nutrition is not only disease, but a prolific source of disease, consequently what necessarily tends to render Nutrition *more imperfect* can never be rationally prescribed as remedial in disease.

As it is a natural impossibility for anything to contribute towards healthy Nutrition which the human system cannot assimilate to itself, as it can only assimilate *food* properly so called; and as Drug substances are not only incapable of being so assimilated, but are directly antagonistic to vitality, the use of such substances, from their very nature, must necessarily be productive of a greater or lesser amount of injury to man, and therefore *never can be curative of disease.*

The mischievous effects which have been demonstrably ascertained to follow the prescription of drugs are—the derangement of the nutritive functions, nervous irritation, impurity of blood, the disturbance more or less of the organic action of the whole system, with a waste of vital energy in efforts to expel them from the system, and in addition to all this, the generation of new and distinct derangements of the bodily conditions which are known as *Drug Diseases.*

No system of practice based on the administration of Drugs can ever rank as Hygienic or Therapeutical, because, as the most eminent authorities concur in declaring—there is *no proof whatever* that *any* drug exerts *any* remedial influence over *any* disease, whereas as Dr. Wendell Holmes observes, "the presumption *always is,* that every noxious agent, including medicines proper, which *hurts* a well man, *hurts* a sick one." —*Annual Address Delivered before Massachusetts Medical Society.*

It is illogical and unphilosophical to argue from the fact of

Drugs having been taken without any injurious results becoming immediately apparent, that therefore they are not injurious, or to suppose that they are capable of producing beneficial effects.

It is also illogical and unphilosophical to argue from the fact of persons recovering from disease while under drug treatment that, therefore, the Drugs taken were *the cause* of the recovery; because, as Dr. Barklay, in his *Medical Errors*, remarks —"There is no argument more fallacious or more opposed to sound inductive reasoning than that which asserts the curative power of a remedy, because in ten, twenty, or even a hundred cases recovery *followed* its administration." And he calls this "*the oldest, the most obstinate, the most universal fallacy* which has in all ages hindered, *more than any other*, the progress of knowledge, and has been the constant theme of logicians of all times—the *post hoc, ergo propter hoc*—the belief that *a sequence* necessarily implies a *relation of cause and effect.*"—Page 119.

It is equally illogical and unphilosophical to argue from the fact of some drugs being followed by peculiar effects on particular organs, that, therefore, those drugs must possess special curative affinities for diseases attacking those organs, because as, a host of authorities testify, experience proves that the diseases over which the particular drugs are assumed to exert special curative power, when let run their course, *cease just as soon* or rather sooner *without them.*

These conclusions are sustained by logical proofs extending over thousands of years—the whole history of medicine, in fact, being little else than a record of successive changes in its theories and practices, with nothing positive, nothing fixed or certain, to mark its progress and crown its labours as a *Healing Art;* while now its leading teachers and practitioners lament that "all is vanity and vexation of spirit;" that of Drug "Therapeutics as a trustworthy science, *it is certain we have only the expectation*;" and, consequently, that the system of Drug Medication, as at present practised, "*has neither philosophy nor common sense to recommend it.*"—Dr. Trall in *Medical Mirror*, August, 1867.

And finally, on the candid consideration of the whole evidence, may not a conscientious verdict be given, in accordance with the conviction expressed by Dr. Wendell Holmes, in addressing his brethren of the Massachussetts Medical Society—"*I firmly believe that if the whole* MATERIA MEDICA, *as now used, could be sunk to the bottom of the sea, it would be all the better for mankind—and all the worse for the fishes!*"

## CHAPTER XIII.

*The difference between Hydropathy and Physic—the same sources of knowledge open to both—The difference in the use made of them—Physic practice not based on the truths disclosed by Physiology and Pathology—Those truths perverted to sustain old theories—Errors in Practice the result of errors in Education—Responsibility of Medical teachers—Erroneous Pathology—Symptoms mistaken for diseases—Multiplication of diseases by names—Hydropathic and Physic practice contrasted in Fever.*

Sound views respecting the nature of disease is not only an essential preliminary to undertaking its cure, but also to the employment of such means of cure as are in accordance with the laws of Nature. The differences on these subjects between the Hydropathic system and that of Drug-Medication have been generally indicated in the two preceding chapters; but as the real character of those differences should be prominent in the mind of every one who desires to become thoroughly acquainted with the practical value of either system, it is necessary to go a little more into detail.

*Physiology*, we have stated, teaches the laws and operations of normal or healthy life, while a knowledge of *the means* by which we can best live in consistency with those laws, so as to maintain a state of perfect health, is termed *Hygiene*.

*Pathology* deals generally with diseased structures and conditions, the causes which induce morbid action, and the signs or symptoms by which those various causes make themselves known; while the knowledge of the means by which diseases can be remedied constitutes what is called *Therapeutics.*

Now these sources of scientific and practical knowledge are alike open to the Drug-practitioner and to the Hydropathist. Nature is not a Janus, and does not wear two faces. How, then, does it come to pass that we have two so diametrically opposite systems of teaching and of practice, yet both pretending to be consistent with nature? In this way:—

Pathological and Therapeutical knowlege, it will be observed, is intimately connected with, and largely dependent on, a correct knowledge of Physiology; for without a perfectly accurate knowledge of the laws which govern the normal or healthful operations of the organs of life, how can a correct knowledge of their abnormal or disordered conditions be acquired? And, above all, if we have not a perfectly correct acquaintance with *Hygiene*, or the conditions which Nature has prescribed as essential to the maintenance of perfect life, how can a rational knowledge be obtained of *Therapeutics*, that is, of the best means by which, in conformity with the ordinances of Nature, abnormal states may be corrected, and healthful normal action restored?

Thus, an intimate dependent relationship exists between these departments of medical knowledge; and it is obvious that an imperfect Physiology must lead to an imperfect Hygiene, and that these imperfections must necessarily be reflected on and influence Pathology and Therapeutics. Here, then, we have distinctly indicated the great source of the difference between Hydropathy and Drug Medication—the source of the errors that have pervaded, and still pervade, all medical systems, and at the same time the source of all the excellencies of Hydropathic practice.

Medical systems were fashioned in accordance with crude conjectures and speculative theories *ages before* Anatomy, Physiology, and Pathology were successfully cultivated and obtained [illegible]thing like scientific development. Hence the ever-varying [illegible] in the treatment of disease which those crude hypothetical systems recognised and taught *never had a scientific basis*—never rested on natural truth—never was inspired by nature, nor in concord with unerring law. Whereas with Hydropathy the case is exactly the reverse; for it appeals to no speculative hypothesis or theory—there is no disputing about the character or action of the agents it employs; and although the natural means it works with were very imperfectly understood and applied from the earliest ages, that did not make them the less natural; while now, that Physiology and Pathology have been highly cultivated into sciences—in other words, since the laws of Nature have been more fully revealed to us, so has Hydropathy been developed into a more perfect system, *based on the truths thus disclosed*—it is consistent with them all, and therefore its practice must necessarily be in perfect harmony with Nature.

Anatomical, Physiological, and Pathological knowledge was in a very crude state at the commencement of the present century; while medical practice, based on false systems, had long been established on totally false principles. As those departments of knowledge were more successfully cultivated, and the laws of Nature in health and disease became more clearly revealed and known, what then took place? Why, teachers in medical schools and colleges misinterpreted those laws—twisted, mangled, and perverted the great truths they revealed, *in order to sustain old theories and systems*, instead of regulating their teaching and practice by the new light those truths afforded.

Hence the remarkable variations in medical teaching and practice, ever fluctuating,—nothing constant and certain but human suffering; and hence, too, the apparent anomaly of practitioners extensively versed in medical science properly so-called, and yet profoundly ignorant of the Healing Art.

A prolific source of evil has been, that in medical schools and colleges Physiology and Pathology have never yet been studied and taught with a single view to establish on their truths a rational system of Hygiene and Therapeutics. On the contrary, their truths have been shamefully neglected, or perversely made available to sustain foregone conclusions—to prop up some school dogma about the nature of disease, or some ruling theory respecting its cure. Hence, while all physicians of character, all writers of any note, freely admit the unsatisfactory results of Drug Therapeutics—the disappointments and uncertainties that are perpetually encountered in practice, few indeed ever dream of questioning the perfect soundness of the *theory* on which Drug Medication is based. They take that for granted; and thus we have perpetuated the errors, perplexities, and calamities that so bountifully follow from such practice. Founded on error, and followed in defiance of Nature, how could the results of such practice be otherwise?

The case of Priessnitz, as contrasted with the practice of the Drugging system, illustrates the subject admirably. Priessnitz had no book-learning whatever. He had not received even a liberal education, and was destitute of any scientific acquaintance with Anatomy, Physiology, Hygiene, Pathology, or Therapeutics, as taught in the schools; but then he had no pre-conceived opinions to fetter his judgment—no school teaching to unlearn—no prejudices to overcome—no speculative theories to warp his mind, and pervert or neutralize the facts of experience. Thus free to follow truth, he grew up an unprejudiced student of Nature, and, by the gradual expansion of his wonderful powers of mind, he accumulated a vast array of facts, by generalising which he fashioned for himself a rude but natural system of Hygiene and of Therapeutics. Had he possessed scientific knowledge, it doubtless would have been all the better for him; but his deficiency in this respect only makes the contrast the more striking.

Confirmed invalids flocked to him from all parts of Europe. Many of them had been for years under the treatment of distinguished practitioners—learned Anatomists, Physiologists, and Pathologists—men renowned for their professional eminence, had exhausted all the resources of *their* Therapeutics without affording relief to their patients, who in their extremity, hoping almost against hope, sought relief from the "Silesian Peasant," and, marvellous to relate, in defiance of all "legitimate medicine," found it!

Considering the class, the character, and the number of the cases, the results were certainly wonderful. Of *seven thousand five hundred* patients who visited Gräfenberg for advice and treatment, up to the year 1841, or within the space of about twenty years, there were only *thirty-nine* deaths; and some of these, according to the registry of the Austrian police, "had died *before* commencing the treatment, while others were reported in a *forlorn state* before anything was attempted."

Now, these patients were labouring under various forms, some very complicated, of chronic disease, many had been pronounced incurable, and all had abandoned their physicians in despair—how, then, are we to account for the astonishing cures effected—for the extraordinary results produced by the system of Priessnitz, as contrasted with the practice of the medical practitioners, whose incurable patients, possessed of the means, flocked to him? The explanation is simple. The practice followed by Priessnitz he learned from Nature, and, although he was incapable of giving a learned description of any disease, or a scientific reason *why* his treatment was successful, or *how* the effects were produced, still he felt perfectly assured by the confidence his experience had taught him to repose in Nature, that there was an invariable constancy in her laws, and that similar causes, in similar circumstances, would always be followed by similar results.

On the other hand, what did all their Anatomy, Physiology, and Pathology—all the "medical science" taught in all the colleges do for the physicians who turned over their incurable patients to Priessnitz? All this knowledge in their hands was simply *therapeutically worthless*, and solely so because it was *wrongly applied.* It was applied in conformity with false systems of practice, and not made available for ascertaining the laws and purposes of Nature, and being solely guided thereby. Hence, all the failure and discredit.

Learned physicians are just like learned theologians who, profoundly skilled in ancient languages, bring all their philological acumen to bear upon controverted scriptural readings, not for the candid purpose of ascertaining the true meaning, and adopting it, whatever it may be, but with minds preoccupied by some particular belief in support of which they desire to accumulate evidence and strengthen argument. Exactly so too with the professors and teachers of the medical world, their knowledge is perverted from its true purposes, and devoted to building up and sustaining false systems of practice based on foregone conclusions that have no foundation in Nature, and against which modern science, rightly understood, is a standing and uncompromising protest.

Thus there is no difficulty in understanding how very eminent Anatomists, Physiologists, and Pathologists of the Physic School fail to become successful practitioners of the Healing Art. They have been trained up to follow false guides, to believe in false facts—in theories and dogmas propounded *ex cathedra* as true, but that have not a particle of truth to sustain them—and if, as Lord Bacon says, "false facts be once on foot, what thorough neglect of examination, the countenance of antiquity, and the use of them in discourse, *they are scarce ever retracted.*" Yet such false facts admittedly form the staple of Medical Therapeutics, for as Professor Gregory of Edinburgh said to his class—"Gentlemen, ninety-nine out of every hundred medical facts are *medical lies*; and medical doctrines are, for the most part, *stark, staring nonsense.*" In such "lies" and such "nonsense" generation after generation of medical men have been educated and trained, and there are few possessed of the aptitude and strength of mind that is required to allow experience, subsequently attained, to correct the errors of professional education and training.

"The first step I myself made in rational medicine," says Dr. Dickson, "was to *unlearn* all I had been taught; and that at the beginning *was difficult.* How I ever came to believe one-half the rubbish propounded by medical teachers, I cannot now understand; for the whole doctrines of the schools are a tissue of *the most glaring and self-evident absurdities.*"—*Fallacies of the Faculty*, lect. 1.

Practice based on such doctrines and teaching can never prove therapeutically successful no matter how profoundly "learned" the mind may be that directs it. An intelligent, experienced Bath attendant, with scarcely what may be called any education at all, and whose knowledge of disease has been picked up in the ordinary practice of a well-conducted Hydropathic establishment, would be an infinitely safer guide to follow in the practical treatment of the vast majority of diseased conditions than the most renowned Physician, whose profound knowledge of all the *ologies* had only taught him to believe in the sovereign virtues of bleeding, blistering, purging, and drugging with such poisons as mercury, opium, antimony, digitalis, and so forth.

Thus we see that, unless Physiology, or the laws of normal life, is so studied as to secure the foundation for a sound system of Hygiene, or the means which Nature has ordained for maintaining the human body in a perfectly healthy condition, all subsequent knowledge, as a basis for practice, must necessarily be imperfect. Pathology, no matter how deeply studied, can never correct the blunders of an imperfect Physiology, and a system of therapeutics, no matter how artistically framed or plausibly elaborated, can never correct the errors certain to flow from an ignorant and deceptive Hygiene. Hence it is, that ordinary medical practice is so full of blunders, errors, and imperfections, and is so frequently attended with disastrous results, as all candid writers freely admit.

> "There is, indeed, scarcely one physician of cultivated intellect and tenacious memory," observes Dr. Inman, "who could not write an *interesting*—nay, even a *fascinating*—book respecting popular medical errors, and the fallacies of the faculty; but all forbear, under the policy that it is an ill bird which fouls its own nest!"—*Medical Mirror*, April, 1868.

We think we have already supplied ample evidence to warrant the belief that such a book, honestly written, would undoubtedly prove *sensational*, and, in so far, *interesting*; but that it would be *fascinating*—that, as a record of "medical errors" and "fallacies" leading to a wholesale system of medical murdering, it would absolutely captivate, enchant, *fascinate* the reader, is a supposition in which Dr. Inman may indulge; yet those who reflect at all are more likely to arrive at a different conclusion. Especially when it is considered that, Sir John Forbes, M.D.—as high an authority as any of his day affirmed (*British and Foreign Medical Review*, vol. xxi., p. 447), "prejudices and errors may be ridiculous *only* in many departments of science; *in medicine they are* MURDEROUS"—or "FASCINATING," as Dr. Inman would call them.

However valuable all knowledge may be in itself, it is obvious that the only practical value it possesses, lies in its right application. To a large extent the celebrated Dr. Baillie was correct in saying, "the dead body is that *great basis* on which we are to build the knowledge that is to guide us in distributing life and health to our fellow creatures." But a very bad building may be erected on a good foundation, and an excellent building may be converted to very bad purposes. So with Pathological investigations and knowledge. There are, as Dr. Dickson observes, "medical materialists, who, hoping to find the *origin* of every disease made manifest by the scalpel, are ever mistaking *effects* for *causes*. Loth to believe that death may take place without even a palpable change of structure, these individuals direct their attention to the minutiæ of the dead, and finding in their search some paltry enlargement, some trifling ulceration, or, it may be, some formidable tumor or abscess, hastily set this down as the *first cause* of a general disease, of which it was only a development or coincident part." —*Fallacies of the Faculty*, lect. i.

Such persons build badly on a good foundation. They, as Dr. Uwens observes, "put consequence for cause, incident for source, change in the condition of blood-vessels for powers producing such change. It is an error which has its origin in the blood and filth of the dissecting room, and which tends to degrade medicine from the dignity of a science to the mere detail of an art." But now the profession is rushing into another extreme. Pathological knowledge thus acquired is taught in all the schools, but when applied in practice is found productive of an immensity of evil, and now a new theory is getting into fashion, according to which "Chemistry holds the key of the medicine of the future."

"Dead body slicing has had its innings," says the *Medical Mirror*, December, 1867, "and it has been found a broken reed for the prevention of disease, and a prompter of nothing but heavy books, containing *contradictory descriptions* of diseased conditions." "If the consummation of our skill is reached by pandering to the curiosity of morbid anatomists, then are we of the profession not unlike vultures flying round a shamble, or crows picking at a dung heap." These are complimentary comparisons, but now all this is to be changed, and Chemistry is to supply the foundation for a new system of Therapeutics, because, says the same authority, "without Chemistry we can know nothing of the action of drugs on the living body." Common-sense people might consider it quite sufficient to know about "the action of drugs," that they are *always necessarily* followed by effects more or less injurious to the human system, without being at all curious to know exactly *how* those effects are produced, or to know when death *perceptibly* follows their administration, what particular appearances, caused by their poisonous action, a *post mortem* might disclose. Even this knowledge is useful in its way, but until Chemistry can convert drugs into nutritious substances to nourish vitality, instead of waging war against it, a rational system of Therapeutics can never be raised on such a basis, which is neither more savoury nor more salubrious than the "shambles" and the "dung heap" the *Mirror* refers to.

However, giving a greater prominence to Chemistry than at present in Pathological studies can only tend to increased complication and confusion. To believe that Chemistry applied in any way to the dead body can succeed in discovering the *origin* of disease, is just as sensible as to believe that by breaking a looking-glass we could seize upon the image it reflects. Micro-chemical analysis has, unquestionably, in this century, contributed large and valuable additions to our Physiological know[illegible] ledge. Yet, with all the aid that has thus been afforded to Pathologists, they have not been acting more rationally than breaking looking-glasses—they have been senselessly in the pursuit of shadows. Overlooking the true source and nature of disease, they have seized upon its ever-varying phenomena—its signs or symptoms—magnified them into separate and distinct forms of disease, and filled bulky volumes with specific instructions as to the treatment of each! Thus, as Dr. James Wilson observes—

> "The *names* of diseases are LEGION—diseased conditions *few*. Hectic fever, hæmopthysis, hydrocephalus, bronchitis, pneumonia, pleurisy, peritonitis, gastro-enterite, tabes mesenterica, psoas abscess, white swelling, scrofulous caries, sinuses and ulcers, atrophy, ophthalmia, &c., &c., seem on the mention of them a great crowd of diseases, selected from far distant orders in a nosological system, implying as many varieties of disease, while, *in reality*, this formidable assemblage of hard and soft names represents but the phenomena following in the train of *the general diseased condition of the blood.*
>
> "The grand error of physic, in all times past, and the most fruitful source of suffering and death thereby, has been this setting of *names* for *things*, fighting with shadows (symptoms) instead of realities (diseased conditions themselves). Hence the *matter*, *manner*, *seat*, and *nature* of disease were postponed to its name, and alike neglected in the measures of medication; corporeal ailments being treated according to names; and ten thousand remedial expedients being devised to meet every variety and shade of symptom; and thus and thereby to 'knock down' diseases, as it is phrased, but more properly and literally *knocking down the patient often to rise no more.*"—*Principles and Practice of the Water Cure*, p. 391.

The result of all this has been, that Pathology, unenlightened and unguided by sound Physiology and Hygiene, has established a vicious system of Therapeutics, the baneful effects of which we see reflected in the multitude of evils that are incessantly flowing from Drug Medication. Under such circumstances, medical practice never can produce satisfactory results, and hence there is a perpetual hankering after Drug novelties, in the hope that something more beneficial may turn up; but no effort is made to remove the cause of all this failure—the erroneous and contradictory theory on which such practice is based. In reality, the responsibility does not rest so much with the ordinary run of practitioners as with their teachers, and with the leading physicians and medical journals, which snub, and often ruin, any young practitioner who evinces a disposition to think independently and act conscientiously.

Can it be wondered that educated in the belief of false facts, and trained in the practice of false systems, the great bulk of medical practitioners should see no reason ever to change—ever to seriously question the truth of the healing powers they have been taught to attribute to medicines. Practice may change, doses may vary, one drug may be substituted for another that has lost repute as a specific, an ingenious pharmacy may feed the craving for tentative novelties, and patients may be deluded by the belief that in a multitude of remedies there must be some relief, but while all this goes on, a serious disbelief in the suppositional virtues of Physic is seldom indeed permitted to interfere with its lucrative practice.

The great bulk of medical men, as Dr. Andrew Combe observes, "habitually act and speak as if they considered their only business to be the prescription of drugs, or some active external remedy, such as a blister or a bleeding, and in ordinary medical education, *no attempt whatever* is made to direct the attention of the student to the value of *preservative* or *preventive treatment*, or to those auxiliaries to recovery from illness which it is the province of *Hygiene* to unfold.—*British and Foreign Medical Review*, vol. xxi., p. 506. Every day, with the increasing intelligence of the age, the public are becoming more observant of the morbific effects and impotency for good of such medical practice, and thoughtful writers are beginning to appreciate the prophetic wisdom of Sir John Forbes who some two and twenty years ago said of the state of Physic—"things have come to such a pass that they must either *mend* or *end*." But there can be no mending without ending, for when the first principles of any system are radically false the only possible way to mend, is to commence by a complete *ending* as far as they are concerned—a total repudiation and casting away:

"If," admits a high professional authority, "cur object is to prevent death and to lengthen life to the utmost limit permitted to mortals, then

> must we cast away the old-fashioned *dicta* and the wise saws of *the old women of medicine, who prate eternally in the stereotype utterances of a by-gone age.*
>
> "The profession has worn the old garments of the departed heads of the profession long enough. The sun of modern science lights up the threadbare, well worn spots. *Our medical edifice must be built anew, for no tinkering of theories can hide the chaotic confusion of our Text-Books and our* Monographs."—*Medical Mirror*, Dec., 1867.

And the same authority, in noticing "a system of medicine," which Dr. Reynold's, Professor at University College, London, is bringing out in conjunction with no less than thirty-seven medical teachers, says, "one cannot read the mode in which disease is recommended to be treated, without seeing that *all*, with scarce a doubtful exception, have *lost confidence in the traditional principles on which remedies have been selected, and are beating about for a new guiding star*."—*Ibid*, May, 1868. In other words, there is the want felt for a renewed "tinkering of theories, to hide the chaotic confusion" in which the principles and practice of medicine are so hopelessly and so glaringly involved.

Now, Hydropathic practice differs essentially from all this. It has its guiding Star in Nature, and wants no other. There is no "Chaotic confusion" in its text-books or monographs—no "tinkering" required to patch up the chinks and flaws in its theories. By simply following the teachings and promptings of Nature we see what the imperfect application of Hydropathy accomplished under very adverse circumstances—we see the marvellous results that Priessnitz produced, and now, when scientifically developed and applied by able and conscientious Physicians, its practice is commending itself more and more to the reasoning intelligence of the age.

It has passed into a maxim that "the knowledge of a disease is half its cure," in ninety-nine cases out of a hundred the other half consists in *proper* and *prompt action*. It is in this respect that Hydropathy excels transcendently. *Promptitude* in the employment of its natural means is the great source of its successful practice; and in the Bath it possesses a prompt and potent agent incomparably superior to any other means that have heretofore existed. Comparing the body in disease to a sponge, Erasmus Wilson, with an expressive sententiousness, affirms, that by means of the Bath—"we squeeze the sponge as we will; we replenish it as we will!"

Contrast, for example, the difference between Physic practice and Hydropathic in the case of the disordered bodily condition called *fever*. The signs or symptoms of the disturbance in the system are manifested more or less vividly by the pulse, the skin, the stomach, the head, and a general discomfort. The Physic Doctor in such a case wastes not hours, but often valuable days waiting for the decided development of such symptoms as will enable him to give, what he calls the disease, a particular *name*. He has been taught to distinguish fevers by a variety of symptoms and formidable names as typhoid; typhus, intermittent and its varieties; remittent and its varieties; variola; rubeola; scarlatina, &c., &c., and further that "there is no disease in which the premonitory symptoms are *so diversified* as those of fever, owing to the *general resemblance* discernable in the commencement of *every* febrile disturbance, whether idiopathic or symptomatic, and it is not until the *symptoms have continued for some time* that the practitioner can discriminate the precise nature of the disease."—*Cyclopædia Pract. Med.*, vol. ii., p. 165.

Thus instructed, the doctor *waits* patiently till the symptoms become so marked that he can give them a *name*, for then he has been taught a specific form of treatment *for every name!*—for curing all the evils that each *name* represents! Thus the disease is allowed full opportunity to establish itself in the system, for that is really the meaning of symptoms developing themselves. This procrastination, however, gives rise to increased irritation in the system—the blood is becoming more impure every hour that is wasted—the circulation and all that is dependent thereon becomes more vitiated—functional complications are increased; and, finally, by the time the doctor has made up his mind by what *name* to call the symptoms, whether typhus, small-pox, scarlatina, or anything else, the vitality of the patient may have become so engaged that a fatal termination is more or less probable. But probability is always increased, and too often converted into a certainty, according to the nature of the "remedies" employed; for *in every case Physic practice only adds fuel to the flames.* In this way human life is destroyed, for *no person possessed of recuperative vitality should ever die naturally of any Fever.* Fever deaths, in all such cases, are the result of *mal-practice.*

In such cases Hydropathic practice is easy, simple, and instantaneously remedial, by assisting Nature in her efforts to dislodge and eject from the system the morbific cause of the disturbed action that has been commenced. There is no childish folly committed, wasting valuable time in watching the fleeting shadows of the symptomatic phenomena—no paltering with an evil when immediate means are demanded to abate it. The Hydropathic physician knows, and acts skilfully on the knowledge, that the blood is the medium by which vitality is nourished in every portion of the system, and the whole body freed from its effete impurities. He operates, therefore, instantly on the whole vital organism through the blood. The *wet sheet packing* is an admirable means; it brings the blood to the surface, acts on the skin, induces a copious expulsion of excrementitious matter, and thus, by strengthening vitality, assists Nature to work her own cure. It is a certain means by which to aid Nature in the cure of all fevers, and it can be commanded when the Bath cannot.

But in all cases, when The Bath is available, its action is more agreeable, more prompt, and more effectual than any other means that can be employed, and, under *proper administration,* it is suitable for every one. Remember what was explained (page 197) about every drop of blood in the body being sent through the whole circulatory system at least once every three minutes; and consider how the blood, in its minutest ramification through every tissue and part, absorbs the effete waste, brings it to the surface, and deposits it there to be discharged by the seven millions of pores stimulated into the active performance of their functions under the genial influence of heat; then consider how the blood thus freed from poisonous impurities can be rapidly fed with nutriment by copious draughts of water, returning again on its circulatory course to perform its two-fold office of conveying food to the vitality of every part, and gathering up a load of fresh impurities from every part for elimination from the system—a consideration of these facts will give some idea of how potent the Bath is in eliminating disease from the system, more especially in all diseases in which the purity of the blood is primarily involved, and in fevers blood-poison is always present in the earliest stages, if, indeed, not directly the exciting cause of them. The action of the Bath is instantaneous and effectual, and, thus considering its command over the sources of vitality, we can realise, in some degree, the force of Erasmus Wilson's terse truth—"*We can squeeze the sponge as we will; we can replenish it as we will.*"

The difference between Physic and Hydropathic practice is equally great in the treatment of every other disease, and may be briefly summed up by saying—that the effect of Physic practice, in all cases, necessarily is to *weaken vitality,* and thwart Nature's remedial efforts; while Hydropathic practice *strengthens and invigorates vitality,* and assists Nature to work out and complete her own cures.

## CHAPTER XIV.

*Opposition to new truths a characteristic of the medical profession—Illustration supplied by the cases of Harvey, Sydenham, Paré, Jenner, Hunter, Sir Charles Bell, and the history of anæsthetic agents—The opposition to the Bath of the same character.*

If we reflect on the proverbial *inertia* of the professional mind, and the indisposition that too generally exists to admit anything which does not accord with preconceived opinion, or commend itself to the accredited dogmas and prejudices of established systems, we cannot be much surprised—notwithstanding the superior enlightenment of our age—that the Hot-Air Bath should have had to encounter, on its revival and establishment, the silent indifference or open hostility of the great bulk of the medical profession—more especially so, indeed, of its so-called heads and leaders. The well-attested therapeutic properties which it presented for investigation were received, shameful to relate, with an ignorant irrational scepticism by presumptuous guides of medical opinion, who judged by false theories, and obstinately refused to perform the duty of practical inquiry. Yet these very men would eagerly welcome any absurdity if presented in the shape of *a novelty* in *drugging*—they would accredit any speculative nonsense in the form of a theory that proposed to whitewash the manifest imperfections in their own empirical art—they would hail with delight any marvellous fiction about drug cures, no matter how self-evident the imposture, provided only that it chimed in with the sanctified routine of thought and practice.

And so has it ever been in all ages of the world; while those who have endeavoured to enlighten and improve mankind have suffered persecution, and too frequently been doomed to cruel deaths. "Those who have laboured most zealously to improve mankind," says the elder Disraeli, "have been those who have suffered most from ignorance, and the discoverers of new arts and sciences have hardly ever lived to see them adopted by the world." This is true in every department of human knowledge, but in no profession has it been more painfully apparent than in the medical Its whole history presents a continuous struggle of dominant error to resist the innovations of improving truth. No man whose genius reflected honour on his profession but was compelled to suffer persecution, for no other apparent reason than that his superiority excited the envious feelings of professional contemporaries, who considered they had vested interests in established ignorance and in the mal-practices it sanctioned. This is a truth that stares us in the face on every page of medical history, and it is by thus looking into the proceedings of the past—by observing the conduct of the profession whenever great truths were announced that tended to inform ignorance, increase knowledge, and benefit mankind—by noting the incredulity, the opposition, the virulent abuse they had to encounter, that we can fairly estimate the worth of medical opposition when it is directed in our own day against any such innovating improvement as The Bath, though pronounced a "boon to humanity."

To go no further back than the case of Harvey, who is now held to be "illustrious," in whose honour orations are pronounced, and after whom medical societies are named, we find that his generation did not so recognise his merits. Lecturing unostentatiously on anatomy and surgery to a few students in London, he quietly demonstrated, session after session, to his class for several years—before venturing to publish it—his grand discovery of the circulation of the blood—a discovery that reveals to us the admirable mechanism of our being, so wonderful in design, so perfect in adaptation, so harmonious in its complexity, and yet so beautiful in its simplicity. But when, in 1628, he did venture to publish his great work, what was the result? Did medical men, anxious to gain knowledge, to acquire any information likely to improve their practice, and ennable them more successfully to combat disease, cordially welcome so glorious a discovery? No, indeed; they scouted, and reviled, and repudiated the discovery; and Harvey became the butt of the professional prejudices and presumptuous ignorance of his day.

He was denounced as an impostor, and represented as a quack; ridiculed as "only a dissecter of insects, frogs, and other reptiles," he had to endure whatever opprobrium professional envy and malice could excite against him. We are told "'twas believed by the vulgar he was crack-brained, and *all the physicians* were against him!"

"The old physicians," says Dr. Pettigrew in his *Biographical Memoirs*, "believed that in the practice of medicine there was nothing to be attained beyond what the ancients had already acquired; and *they died in the full enjoyment of their ignorance*." None, it is said, who had reached forty years could ever be induced to admit the circulation of the blood, or to even study partially Harvey's demonstration! As an excuse for such dogged rejection of new truths, Dr. Johnstone says, that "physicians of a certain reputation have little to gain, and may lose much"—they pretend, and their credulous patients believe, that their knowledge and practice are perfect, an admission, therefore, that anything could be *new* and *improving to them*, would be an admission of their own imperfections, which is the last thing empirical practitioners are likely to do as regards the principles or theories of their art. But, adds Dr. Johnstone, "it *is shocking* that works of great merit have had this misfortune, and Harvey lost patients by his works." When Sir George Ent urged Harvey to print his *De Generatione Animalium*, he replied, "*You are not ignorant of the great trouble my lucubrations, formerly published, have raised*."

Harvey, however, had a singular triumph—he lived long enough to see his doctrine received and established throughout Europe. "He is the only man I know," observed the philosophic Hobbes, "that, conquering envy, hath established a new doctrine in his life-time." Yet, as Dr. Pettigrew remarks, "the labour and application of twenty-five years were requisite to ensure the reception of his opinions"—in other words, a generation of old bigots and obstructives had to die out in the full enjoyment of their ignorance, before the grand truth of the circulation could obtain generally recognition!

The author of *Eminent Medical Men* says, that "even after its truth was generally recognised, Harvey does not appear to have been particularly successful in practice," and the reason assigned is significant—because he *disdained those arts of gaining the confidence of the public by which so many succeed.*" That is, he disdained to pander to public credulities—to cultivate the empirical artifices by which pretentious mediocrity rises and thrives. From the little we can now learn concerning his practice of medicine, it is evident that, as a man of genius, as a skilful Anatomist, Surgeon, and Physiologist, he had a proper contempt for the false theories and gross impostures of mere Physic. Aubrey says, "all his profession would allow him to be an excellent Anatomist; but I never heard any that admired his *therapeutique way.* I knew several practitioners in this towne (London), that would not give three pence for one of his bills (prescriptions), and that a man could hardly tell by one of his bills what he did aime at. He did not care for Chemistry, and *was wont to speak against them with undervalue.*" Evidently he reprobated chemical quackery, and regarded "pharmaceutical filth" as an abomination! Having no faith in Physic, as no enlightened Physiologist can have, he was too conscientious and honourable to follow medicine *as a trade.* And even in our own day, no man holding Harvey's opinions, and acting as he did in consistency with them, could attain to eminent repute as a mere Physician. In the practice of Surgery honorable men can and do attain high distinction by the honorable and conscientious practice of a noble science; but when a mere physician—a drug-monger—gains celebrity, we are at once presented with *prima facie* evidence of the public gullibility, and of his great proficiency in the arts and accomplishments of empiricism.

Harvey suffered greatly from the gout; and what Aubrey relates of the mode he adopted to procure relief is significant:—"He would then sitt with his legges bare, if it were frost, on the leads of Cockaine House, putt them into a *payle of water*, till he was almost dead with cold, and betake himselfe to his *stove*, and *so 'twas gone!*" A simple and natural remedy truly; but rather *dangerous practice*, which no Hydropathist would recommend. It is no wonder, however, that his prescriptions were not valued, if he prescribed even a less heroic application of Water and Temperature, in preference to Apothecaries' stuff in his treatment of disease.

Sydenham, the most celebrated of English Physicians, who has been styled the "English Hippocrates"—a man of great original genius, though he did not always succeed in carrying out or practically illustrating his own admirable principles, yet because he endeavoured to elevate medicine from the depravity and corruption in which it was sunk, and establish its practice on the foundation of nature, he was reviled and persecuted by those who considered they held "vested interests" in the gullibility of mankind. He was vituperated as a presumptuous innovator; and he repeatedly complains of the envious opposition with which his labours to introduce a more rational and natural treatment of disease were received by his professional brethren, "who defame their brother," he says, "with this view, that they may gain greater esteem themselves, and *build their rise upon the ruins of others*; which is a practice utterly unbecoming men of letters, and even the meanest artizans, who have any regard for probity."—*Sydenham's Works*, Dr. Swan's edit. 3rd, 1753, page 117, par. 40.

Dr. Brady, Master of Caius College, Cambridge, writing to Sydenham on the subject of his studies, says:—

> "Whilst you employ your time in these studies, you will be *grievously censured and calumniated by envious and malicious men*, who will no more spare your name and reputation on this occasion than they did formerly, though by using you so ill they incur the displeasure of the candid and ingenuous part of mankind, who generally treat such slanderers with contempt.—*Ibid*, p. 298.

The calumnies to which Sydenham was exposed from such "envious and malicious men" afford, says his editor, Dr. Swan, "a melancholy proof that neither great abilities, unquestionable candour and integrity, nor the most indefatigable endeavours to serve mankind, can secure a person, *who leaves the common road*, from the unjust censures of the *narrow-spirited, disingenuous and prejudiced part* of the professors of the same science. Whoever make *a new discovery, which tends to overthrow a set of prevailing notions and rules*, venerated probably more for their antiquity than justness, and establish a truly rational theory, and *more effectual methods of practice*, must expect to meet with great opposition from *the ignorant, envious, and prepossessed*, and be treated as rash innovators, designing and interested persons, however conspicuous they may be for learning, prudence, and extensive humanity."—*Ibid*, p. 117, note.

Similar treatment was experienced by the famous French surgeon, Ambrose Paré, who, towards the end of the sixteenth century, proposed to tie the arteries in amputations with a ligature of silk to prevent hemorrhage, instead of adhering to the barbarous practice—though approved and universal—of searing with red-hot irons. "What!" exclaimed professional prejudice, "allow a man's life to hang upon a thread?" and none of his cotemporaries could be induced to abandon the torturing process of the searing iron! So great, indeed, was the reluctance to abandon the cruel cautery for the ligature, that nearly a hundred years afterwards a button of vitriol was ordinarily employed in the Paris hospitals for the stoppage of hemorrhage after amputations, while Dionis was the first French surgeon who, towards the close of the 17th century, taught and recommended Paré's method.

Jenner, whose discovery has immortalised his name as one of the greatest benefactors of the human race, was assailed with all the envenomed malice his jealous contemporaries could command. "What!" said they, "Vaccinate!—use such a diabolical invention, and transform the human race into cows and oxen," or into something like the monster described by Ovid—

"*Semibovemque Virum, Semivirumque bovem.*"

To excite the fanaticism of the ignorant multitude against Jenner, it was alleged by London Drug-Doctors that cases had actually occurred, after Vaccination, of the whole body having been covered over with a growth resembling cow's hair!—while protuberances that betokened the development of horns and tails had also made their appearance! And as there is no folly which passion and prejudice will not lead men to commit, prints were actually published by the opposing Doctors, representing the human visage in the act of transformation, and assuming that of a cow! There was a representation of "Master Jowles, the cow-poxed, ox-cheeked young gentleman;" and of "Miss Mary Ann Lewis, the cow-poxed, cow-manged young lady," who brutified by vaccination, would persist on running on all-fours and lowing in imitation of a cow!

The College of Physicians, who had then a chartered monopoly, would not grant Jenner a licence to practice medicine in the metropolis! On the contrary, jealous of his fame, he was instigated "to quit London, for there was no knowing what an enraged populace might do!" Even the pulpit thundered at him as a monster of presumption and impiety. A learned divine, Dr. Rowley, declared the small-pox to be "Heaven ordained," and the cow-pox and its use "a daring and profane violation of our holy religion." Jenner and all who favoured him were anathematised, and passionate appeals made to excite popular fanaticism—"The projects of these vaccinators seem to bid defiance to Heaven itself, even to the will of God"—was about the most sensible language employed. And thus has it generally been, in all ages, that those who, from their profession and position, should have lighted mankind on the way to knowledge, have on the contrary, laboured to perpetuate the deplorable dominion of ignorance and superstition. "*Envy,*" said Jenner in his last days to his friend, Dr. Fosbroke, "*is the* curse of this country," and among no profession or trade does envy manifest itself in more offensive and dishonorable ways than among high and low who follow Physic for its gains. "No science," says the *British and Foreign Review*, "lulls selfishness to rest—medical science *as little as any*. Satirists have always delighted to picture the jealousies and personalities of medical practitioners." "Could the London world but know the arts by which certain men have got a name, with what astonishment would it stare," says Dr. Dickson, "to find itself precisely in the position of a deluded savage, when, for the first time, he discovered the utter worthlessness of the red and green glass, for which, year after year, he had been unsuspiciously bartering his wealth. In the dark, pigmies seem giants; Britain only knows her great men when they are dead. On Harvey and Jenner, while they lived, the beams of her warming sun never shone—they all but deferred to acknowledge their merits till she saw them on their deaths, surrounded with that halo of immortality which all the nations of the earth united to bestow on them."—*Fallacies of the Faculty, Preface.*

It is seldom from an ignorant public that great men have received injustice, save, indeed, when popular fanaticism has been inflamed against them by the calumnies of "envious and malicious men" for their own evil purposes. It was from their own profession that Harvey, Paré, and Jenner experienced the grossest injustice, and such has been the case with every distinguished discoverer who preceded or succeeded them.

The celebrated John Hunter, whose life was devoted to Anatomical and Physiological researches of inestimable value to mankind—who is now eulogised as "the greatest physiologist the world has ever known"—as "one whose labours raised Surgery from the servility of a mechanical art to a science of the highest order;" and whose collection of comparative Anatomy, which now forms the Museum of the College of Surgeons, London, is represented as "an honour to our age and nation"—as "a monument to his genius, assiduity, and labour, not to be contemplated without surprise and admiration." This truly great man was ridiculed, maligned, and persecuted by the leading practitioners of his day, who were incapable of understanding and appreciating the nature and value of his profound scientific labours. We are informed by Sir Astley Cooper, that a Surgeon in London was "hired to write him down!"—but he adds, "it was a rat assailing a lion, or a pigmy attacking a giant!"—*Life of Sir Astley Cooper, by his nephew*, vol. ii., p. 164.

For nearly forty years Sir Charles Bell laboured with devoted perseverance to elucidate the mysteries of the nervous system, but at every step his investigations were cavilled at, his conclusions disputed, and the merit of his discoveries imputed to others. In the preface to his great work on the nervous system, published in 1830, he says, "the gratification of the inquiry has been very great; *the reception by the profession the reverse of what I expected.* The early announcement of my occupations failed to draw *one encouraging sentence from medical men.*" He tells us his practice was injured, and that every step in his discovery obliged him to work harder than ever to preserve his reputation as a practitioner. The prevailing cast of my mind," he wrote to a friend, "was *to gain celebrity by science*, and this was perhaps the *most extravagant fancy of all.*" M. Pichot, in his life of this eminent man, says, "the vexatious opposition he experienced from the jealousy of his colleagues was such that, when elected to the chair of Physiology in the London University, he was soon compelled, for his own peace of mind, to resign the chair. After his removal from London to Edinburgh, and when he had obtained a world-wide reputation, not one of his medical colleagues in the University would call him into consultation, *unless forced to do so by the express desire of the patient!* He died poor, and Lord Brougham obtained a pension from the Government of £100 a-year for his widow.

The history of anæsthetic agents affords abundant evidence to prove that those to whose labours the world is indebted for many substantial blessings seldom have reaped any advantage from them, while we have illustrated the slowness and reluctancy with which the human min opens to the reception of truth. "There has been a succession of independent spirits," observes Dr. Chapman, "who have refused to acquiesce in the inevitableness of suffering; long before the dawn of organic chemistry, century after century, for two thousand years at least, men have cherished the conviction that, by skilful and patient questioning of Nature, she would be induced to yield up the priceless secret of how pain may be put under the dominion of the human will."

The ancients partially succeeded in causing insensibility to pain, during surgical operations, by various means, but principally by inducing deep sleep from using the root of the mandrake *(atropa mandragora).* Dr. Snow, in his work on *Chloroform and other Anæsthetics,* quotes from Apuleuis, who says:—"If any one is to have a limb mutilated, burnt, or sawn, he may drink half an ounce with wine, and, whilst he sleeps, the member may be cut off without any pain or sense." According to Dioscorides, this root was so employed more than eighteen hundred years ago among the Greeks and Romans "to cause insensibility to pain in those who are to be cut or cauterised; for, being thrown into a deep sleep, they do not perceive pain."

To Sir Humphrey Davy belongs the honour of having been the first, in modern times, to revive inquiry in this direction, and originating the prolific idea which, says Dr. Chapman, "has at length become one of the most glorious realities of the present century." After ten months' continuous, and often hazardous, experiments, he published, in 1800, his *Researches on the Respiration of Nitrous Oxide and other Gases,* in which he gave the results of his various experiments; and suggested to the medical profession that, as Nitrous Oxide seemed capable of destroying physical pain, it might be used with advantage during surgical operations. No one, however, thought the subject worth inquiring into. The medical profession paid no attention to his experiments, and Davy's labours went for nothing—were treated as worthless by his generation; and nearly half a century elapsed before any practical effort was made to make such a discovery serviceable to mankind.

In December, 1844, Horace Wells, a surgeon-dentist, of Hartford, Connecticut, in the United States, became acquainted with Nitrous Oxide, from attending a lecture in which the effects of inhaling it were dwelt upon. He immediately conceived the idea of making it available in his practice, He induced the lecturer to go home with him, and to administer the gas to him, while a brother dentist (Dr. Rige) extracted one of his teeth. The lecturer did so, the gas was inhaled, and the tooth drawn without any sense of pain. On recovering from the effects of the gas, Wells was delighted, and exclaimed that a new era in tooth-drawing had dawned. He made several successful experiments on patients; and at last Drs. Warren and Hayward, who were surgeons, reluctantly induced the Medical College of Boston to have a trial made in a serious case of amputating a limb. But, on the appointed day, the operation was deferred; and it was then decided to test the effects of the gas on a person who wanted a tooth drawn. The inhalation was imperfect in some respect; the person alleged he did feel "some pain;" whereupon all the philosophy and logic of the College jumped to the conclusion that the whole thing was an imposture! Wells, overwhelmed with ridicule, returned to Hartford; fell sick through vexation; retired from practice as a dentist; engaged himself in stuffing and exhibiting birds for a livelihood, and in the sale of shower-baths. After many vicissitudes of fortune, his mind gave way; and, becoming more and more unsettled, he finally died by his own hand.

Wells had a pupil named Morton, who settled in Boston, and still cherished the idea of succeeding in effecting painless operations which Wells had failed to establish in practice. In 1818, the celebrated Faraday stated that the vapour of æther—a product known as early as the thirteenth century—produced effects analogous to those which followed the inhalation of nitrous oxide; and Morton, who studied medicine and chemistry under Dr. Jackson, of Boston, learned from him the use of "chloric æther" as a local application. He was thus led to experiment with æther until he became quite confident that he possessed a powerful ænesthetic, when he induced Drs. Warren and Hayward to test its efficacy on patients in the Massachussetts General Hospital. They consented, and, on the 16th October, 1846, Dr. Warren successfully performed the first painless operation, with this new agent, by removing a tumour in the neck from a patient who remained insensible all the while; and Dr. Hayward, on the following day, was equally successful in extirpating a tumour from the arm of another patient. Morton would not disclose what the agent was that he had so successfully employed; he called it *Leothon;* but Dr. Bigelow, a surgeon of distinction who was present, suspected, from its odour, that it was sulphuric æther, on testing which he found it produced exactly similar effects, and immediately proclaimed the discovery.

The fame of this mode of abridging the sufferings of humanity spread rapidly in the United States, and as promptly did the instructors and guides of medical opinion take up arms against it—not one of whom alleged that he had taken the trouble of testing the efficacy of the agent, or had any rational idea about the merits of a discovery he so unhesitatingly joined in condemning. Dr. Bigelow relates how the medical journals combined to write it down in the face of the undoubted success that had attended its use. A leading medical journal in New York announced that:—

> "The last special wonder has already arrived at the natural term of its existence. It has descended to the bottom of that abyss which has already engulphed so many of its predecessor-novelties, but which continues also to gape for more, until a *humbug yet more prime* shall be thrown into it!"

A medical periodical of repute in Philadelphia declared:—

> "We should not consider it entitled to the least notice, but that we perceive, by a Boston journal, that *prominent members of the profession* have been caught in its meshes"—distinguished surgeons who had tested its merits, and gladly hailed it as a "boon to humanity." Yet this high Physic authority "was fully persuaded that the surgeons of Philadelphia

would not be seduced from the high professional path of duty into the *quagmire of quackery* by this will-o'-the-wisp."

"That the leading surgeons of Boston could be captivated by such an invention has excited our amazement," wrote a New Orleans representative of the Drug School, and by such unreasoning invective, it was sought to discountenance and put down this invaluable discovery. The same incredulity and opposition attended its recognition in Europe as in America. In November, 1846, Dr. Bigelow states that information of the discovery was sent to London and Paris, but he says the distinguished surgeons of Paris received the announcement with indifference. Even the great Velpeau "politely declined" to test its worth! Dr. Boot, of London, who was personally acquainted with Dr. Bigelow, was induced by his representations to make a trial of "the new anodyne process," which he did, on the 19th of December, with perfect success. Dr. Boot then sent Dr. Bigelow's letter to the celebrated Liston, entreating him to test its merits; and, on the 21st of December, this great surgeon at University College Hospital was most successful in its use. In a letter written next day to Professor Miller of Edinburgh, prefaced by exclamations of his intense delight—"Hurrah! Rejoice!"—he gives an account of the operations he performed—he "amputated a thigh, and removed by evulsion (forcibly plucking out) *both* sides of the great toe-nail without the patient being aware of what was doing, so far as regards pain. The amputation-man heard, he says, what we said, and was conscious; but *felt neither the pain* of the incisions nor that of tying the vessels."

What the interests of humanity, and a love of scientific progress could not induce the medical profession, with its pride of opinion, its prejudices and its bigotries, to do, the celebrity of Liston—the unquestionable authority of his name, at once accomplished, viz.—secured for the "new anodyne" a fair investigation of its merits. Experiments were forthwith instituted in nearly every hospital, and, though in some instances with unsatisfactory results, owing to ignorance in properly administering it, yet the general success was undeniable. The evidence thus accumulated both in America and this country shamed, as it were, the two great French surgeons, Velpeau and Roux, into testing its merits; and in January, 1847, they declared, in presence of the two Academies of Paris, that their investigations had been eminently successful, and that the discovery "*was a glorious conquest for humanity.*"

But while the ænesthetic properties of æther were thus triumphantly established—realising the dream of the ancients by bringing physical pain under the dominion of the human will—we have seen the sad fate of Horace Wells, whose experiments led to the discovery, and scarcely less sad was the reward that Morton received. "He shared," says Dr. Chapman, "the fate of almost every discoverer—viz., *poverty, and the danger of being deprived of the honor of the discovery.*" He had taken out a patent for his *Leothon*, but, on chloroform* soon super-

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* *Æther* is produced by the action of acids on alcohol, or on rectified spirits. *Chloroform* is obtained by distilling alcohol with chloride of lime. Professor Simpson of Edinburgh, who has obtained credit as *the discoverer* of chloroform, is *not* entitled to any such merit. In 1831, Mr. Guthrie, an American chemist, obtained chloroform by distilling a mixture of chloride of lime and alcohol, which he improperly called *chloric æther*, and introduced it as such to the profession. Dr. Jackson, as we have stated, made Morton acquainted with it as a local application.

Mr. Jacob Bell, of London, was the *first* to demonstrate the perfect anæsthetic power of this mixture, and exhibited its effects at St. Bartholomew's and Middlesex Hospitals. He also applied it in the private practice of Sir William Lawrence. It was not until October, 1847, that Professor Simpson, who had previously used sulphuric æther, was made acquainted with chloroform for the *first time*, by Mr. Waldie, of the Apothecaries' Hall, Liverpool. Mr. Waldie says—"When in October last (1847), Dr. Simpson introduced the subject to me, inquiring if I knew anything likely to answer, chloric æther was mentioned during the conversation, and, being well acquainted with its composition, and with the volatility, agreeable flavour, and medicinal properties of the chloroform, I recommended him *to try it*"—that is, to try the *pure* product of alcohol distilled with chloride of lime, which is properly called *chloroform*, and which was discovered by Mr. Guthrie in 1831, but improperly named *chloric æther*.

Mr. Waldie gave Professor Simpson a bottle of it, which he used with seding æther, he found his patent valueless, his business destroyed, and, says Druit, "even the bare honour of the invention almost wrested from him."—*Surgeon's Vade Mecum.*

It must not be supposed, however, that the repugnance to what is new and improving, and for the advantage of mankind, which is so marked a characteristic of the medical profession, was in any way abated as regards the employment of anæsthetic agents. On the contrary, an absurd theory was forthwith invented—when the power of these agents could be no longer denied—by which opposition to their use was sought to be justified on the ground that the feeling of pain was essential to the healing process! Men of high repute were absolutely found to contend that pain is salutary!—that when a patient is undergoing some excruciating operation, the agony he is compelled to endure is exceedingly good for him!—and that, consequently, the annihilation of a sense of pain is likely to prove highly hazardous to the patient's life! This theory, so repugnant to sound physiology, found a supporter in the celebrated Majendie, who "doubted if there was any advantage in suppressing pain" —who averred "it was a trivial matter to suffer"—and that "a discovery, the object of which was to prevent pain, was of a slight interest!" Such a thoughtless expression of opinion was totally unworthy of so eminent a physiologist; yet it found favour with a lot of practitioners who had no desire to depart from established routine by learning anything new. So difficult, indeed, is it to uproot inveterate prejudices in the medical mind, that even so late as the Russian War, the Director-General of the Army Medical Department would not sanction the use of chloroform in operations—the sense of excruciating pain he

success. Its "strong, fragrant, etherial, apple-like odour, and sweet penetrating taste," combined with its undoubted anæsthetic properties to make it supersede sulphuric æther in general use as an anæsthetic, and Professor Simpson is in no way entitled to any merit as its discoverer. But this is a sample of the way in which some people manage to appropriate to themselves the labours and merits of others, while the worst of it is, the public generally take things as they find them, and very few ever care about looking beneath the surface.

barbarously considered was a salutary adjuvant to the healing process!

We have brought these few illustrations of Medical obstructiveness before the reader, in order that a just estimate may be formed of the value of medical opinion when pronounced in opposition to any discovery that promises to be of advantage to mankind. Men who have the intellectual capacity and true philosophic spirit to investigate and think for themselves, when they proclaim truths distasteful to professional ignorance and prejudice, must be prepared to encounter the rancorous vituperation of "envious and malicious men," who, caring nothing about truth, never dream of forming an independent opinion, and detest those who do. "Persons who object to a proposition merely because it is new," observes Sir Astley Cooper, "or who endeavour to detract from the merit of the man who first gives efficacy to a new idea by demonstrating its usefulness and applicability, are foolish, unmanly, envious, and illiberal objectors; *they are unworthy of the designation either of professional men or gentlemen*."

No one even superficially acquainted with medical history could, indeed, be guilty of the folly of judging the merits of any newly-discovered remedial agency, that was repugnant to medical dogma, by the opinions which even the most eminent of the profession might express in detraction of it. The Professors, the standard writers, and those who inspire the periodical literature of the profession, are generally the most bigoted, the most intolerant, and the most virulent against new and improving truths. "Two sorts of learned men there are," observes Bishop Berkeley: "one who candidly seek truth by rational means; these are never averse to have their principles looked into and examined by the test of reason. Another sort there is, who learn by rote a set of principles, and a way of thinking which happens to be in vogue; these betray themselves by their anger and surprise, whenever their principles are freely canvassed." And equally so, when anything new is proposed that is not dreamt of in their philosophy.

Just as there are no devices of charlatanism so gross, no errors so pernicious, that medical men with very learned pretensions and high repute have not been found ready with plausible arguments to uphold and defend, when they were in accord with their preconceived opinions, so has it ever been with Truth—no great truth, no useful discovery ever yet obtruded on established dogma to disturb the satisfied repose of monotonous routine that was not unhesitatingly denounced and, if possible, persecuted as dangerous to society, while those whose object is to obstruct human progress never yet were at a loss for colourable reasons to justify their wickedness. But "the asserter of truth may be crushed, and we may breathe a sigh over the martyr as he passes from the field of his labours—ignorance and prejudice may for a time reign triumphant, and the abettors of sloth and selfishness be considered the great, the good, and the wise—but Time rolls on, and Reason will assert her dominion."

The medical profession, of all others, ought to be inspired with lofty aims, and prompted by noble impulses; but its vision is too often bounded by a narrow selfishness, and its motives are too frequently grovelling. The enlightened and truth-seeking—the men who laboured like Harvey, or Hunter, or Bell, receive no appreciative sympathy from those who are interested in retaining things as they exist, and have no desire to cast aside erroneous opinions even to make room for truth. Such a spirit is not only hostile to the progress of science, but it tends to the positive injury of mankind, by increasing personal suffering from preventible disease. Yet in such a spirit was the establishment of the Bath received by the great bulk of the medical profession—by men, too, who never pretended they had studied or tested what they so rashly presumed to condemn, no more than did their worthy predecessors pretend to base their opposition to the discoveries we have noticed on any knowledge of their merits, but blindly opposed, just as their pride, or passion, their ignorance, interests, or prejudice prompted them. What that opposition was worth experience has now proved; and as we marvel at the intolerable perverseness that dictated it, so will the next generation wonder at the stolid prejudice and folly of the present in its opposition to such an undoubted therapeutic agency as the Bath.

For the most part, however, the objections that have been urged against the Bath—as, indeed, against Hydropathic principles generally—are of a very frivolous character, and not overworthy of serious consideration; but a notice of them may be made useful, and prove satisfactory to those who desire full information on the subject, and who may still be inclined to think that an objection must have some reason in it *because* it is advanced by a member of the medical profession.

## CHAPTER XV.

*The animus of the senior members of the profession in opposing the Bath—The objections advanced by Sir Dominic Corrigan—His opinions valueless—They are based on theory and ignorance of what the Bath is, and opposed to Physiology and experience—Eminent authorities who have studied the Bath contradict his statements—Action of the Bath misrepresented—Desire to suppress the truth, and keep the profession and the public in ignorance.*

REFERRING to the obstructive prejudices and jealousies with which some medical men received the revival of the Bath, Dr. Rayner, of Dublin, observes:—"It does not appear that experience has taught the *senior members* of the medical profession the folly and injustice of opposing a thing, merely because it is not exactly in accordance with their pre-conceived and stereotyped notions; for it is a melancholy fact, that nearly every improvement in the science of medicine has still to run the gauntlet of bigotry and intolerance; and although physicians now-a-days carry on a more quiet and dignified warfare than their brethren of old, their opposition is none the less determined and jealous."—*A Voice from the Thermæ*, p. 4.

Among all the various objections that have been urged against The Bath we do not find one which is not directly referable to positive ignorance concerning its nature, or to prejudices arising from pre-conceived opinions. Objections of such a character can have no force or relevancy whatever with intelligent enquiring minds, but only serve to expose the ignorance and folly of those who make them. But many persons have not an opportunity of investigating for themselves, and it is known that too many have had their minds disquieted by groundless allegations against the Bath, while even some who derived manifest benefit from its use have been deterred from persevering in consequence of prejudicial statements having been made to them.

*The construction of the bath,* as established by Dr. Barter, has been objected to as faulty. The pure Eastern Bath is alleged to consist of an atmosphere of hot-air and *visible* vapour, whereas the Irish Bath is stated to have an atmosphere of "dry parched air, contaminated with coke in a state of combustion." Sir Dominic (then plain "Dr.") Corrigan was the first who ventured to publish this statement, not as justified by the result of his own experience, for he appeared careless about instituting any *personal investigation* on his own behalf, but because he was *told* so by Dr. Madden, who ought to have known better, though he had seen a great deal of vapour in the Eastern Bath.

Dr. Madden visited one bath, and then considered himself justified in reporting that the atmosphere consisted of "parched air generated from the combustion of coke in furnaces, *which communicate* by passages extending under the flooring of the bath-rooms *to them* in various directions." On the faith of this report, without any personal knowledge whatever on the subject acquired by personal examination, or inquiry as to the mode of construction, or any personal experience at all of the effects produced by the atmosphere of the Bath in health or disease, Sir Dominic, with all the precipitancy and blundering of a medical theorist, published the following·—

"Every one almost, in his own person, has at one time or another experienced the difference between the impressions of hot dry air on an irritated or congested part, compared with the soothing effect of warm vapour arising from a fomentation or poultice. *What is true of the external parts is equally true of the internal surfaces*"—a physiology, by the way, not known to any standard authority, and not to to be found in any text-book!—"and there can scarcely be imagined any effect more likely to be injurious than the action of hot dry air on the lining mucous membrane of the thousands of air tubes ramifying through the lungs, sweeping along the internal surfaces of those tubes, robbing them of their natural moisture, and drawing the blood in unnatural quantities into the vessels encircling them, to supply more moisture in the place of that carried off, and which can only be supplied from the blood."—*Dublin Hospital Gazette*, January 16, 1860.

There is a good purpose to be served in noticing the errors contained in this passage, because it affords a fair sample of the physiological knowledge, and of the personal acquaintance with the subject, that Physic-Doctors, when they venture to appear in print, usually display concerning the Bath. They theorise first, and then manufacture facts to support their unphilosophic and conjectural assumptions.

The *first* error is in the assumption that there is *any* direct communication whatever between the furnaces by which the Bath is heated, and the atmosphere of the Bath-rooms. There is simply no such communication. Dr. Barter never constructed a Bath in which such a communication existed, and a moment's thought might have convinced these doctors that, if such a communication did exist, then, indeed, the bath-rooms would not be filled with "parched air" alone, but would necessarily be filled with smoke and colly-smut also, while the bathers would enjoy the pleasure of being smutched all over! The flues, as a matter of fact, are so constructed that they impart heat by transmission—they heat air-chambers which communicate with the atmosphere of the Bath, and, no matter what sort of fuel may be used in the furnaces, it is utterly impossible that its combustion could in any wise affect that atmosphere, and, as a plain matter of fact, *it never does.*

The *second* error lies in the assumption that the Bath in the East does consist, in its *pure* state, of an atmosphere of visible vapour and hot-air; it only does so when it becomes foul, after having been some hours in use, and is imperfectly administered. Then, indeed, the unwelcome presence of vapour, surcharged with a very deleterious amount of impurities, becomes rather unpleasantly evident to more senses than one, and the Bath merits the description given by Mr. Ellis of the one he visited in China, where the "stench was excessive," and he thought it "the most disgusting cleansing apparatus he had ever seen."

Dr. Wollaston, who was on the medical staff of the British Army in the Crimea, and has had ample experience of the Bath in the East, says:—

> "I think Dr. Madden and others are led into errors in this way. The baths in the East—*i.e.*, Constantinople, Cairo, Scutari, &c., are constructed to generate hot air by flues around the walls and under the chambers. If you go early the chambers *contain nothing but hot-air*, if you go some hours later, say in the afternoon or evening, you often find a hazy vapour, sometimes considerable. This arises from the hot chamber having some three or four, or even more recesses, fitted up with cocks of cold and hot water *to wash the bathers*, and from *the splashing use of the water*, a quantity falls on the hot floors, and becomes evaporated. In the course of a few hours this evaporation gives a hazy appearance to the atmosphere, but this is an accidental occurrence, and not a *necessary* nor a *primary* condition of the hot-air chamber. The Turkish Bath is, therefore, in *essence* an *air* bath, accidentally it may become a vapour bath. But *inhalation of vapour is not a genial process nor a physiological purpose, and vapour rather obstructs a free exhalation of the cutaneous system*,"—*Dr. Wollaston's Letter to Dr. Barter.*

Thus the great excess of vapour in the Eastern Bath is clearly an impurity, and the bath would be much more healthful and pleasant were its place supplied by a constant flow of pure-heated air, fresh from the atmosphere, with sufficient humidity, as in the Irish Bath. As we have already observed, however, the bath in the East was not, until recently, used as a *curative agent* in the treatment of disease, but only as a prophylactic luxury; nor could it become so unless kept free from an excessive amount of vapour, because, for curative purposes, the higher temperatures must generally be employed; and, it would be the reverse of agreeable if not totally impossible, to use the higher temperatures in such a splashy, slovenly bath as Dr. Wollaston describes.

The *third* error is in assuming that the Irish Bath, or any of those established throughout the United Kingdom on its improved model, as consisting of "*dry parched air.*" On the contrary, the atmosphere is always maintained in a state of great purity, is sufficiently charged with an agreeable amount of moisture, and constantly refreshed with an abundant supply of pure air, heated in its passage from the atmosphere to the hot chambers. True, the moisture is not visible *as vapour*, but let any one take a piece of cold glass or a tumbler into the bath and he will at once become convinced of its presence by observing a plentiful deposit of moisture thereon.

"It will be sufficient for me to say," observes Dr. Barter, "that the change from visible vapour to pure air was made after *a long experience* of the effects of various hot water and steam baths, as also of the Oriental Bath first erected at my establishment by Mr. D. Urquhart. This latter I take to have been, in its leading features, a type of the Oriental Bath. It was heated by a hypocaust, and the washing fountains being situated on the highest level and hottest part of the bath, caused the water which the bathers had used, *saturated with soap and other impurities, to flow over the heated floors*. By this means a disagreeable cloudy atmosphere of steam was maintained, which, however, enjoyable to those accustomed from their infancy to no better, was found by me and other medical men to be *highly objectionable*, and especially prejudicial to invalids, on account of its tendency to raise the circulation and produce other distressing symptoms."—*From Dr. Barter's Explanatory letter, which was refused insertion in the "Dublin Hospital Gazette."*

Thus, it was a matured experience that led Dr. Barter to adopt the improved mode of construction, by which the water used in washing immediately *flows away out of the Bath*, and does not remain treasured up to surcharge its atmosphere with impurities. We incidentally noticed this subject when quoting what Mr. Johnson said in reference to the temperature and atmosphere of the Russian Bath; and we have only to repeat, that however preferable a Bath with a highly vapourish atmosphere may be to none at all, still all such baths are essentially faulty. (Page 136.) A little exercise of common sense, and less of theory and prejudice, might have saved Sir Dominic from such a pitiable exhibition of his ignorance, and, at the same time, have convinced him that pure air is just as essential to health *inside* a bath as it is *outside*, if, indeed, not more so. We are not acquainted with any law of Nature that makes a vitiated atmosphere of cold air which is deleterious to health when inhaled outside a bath become, all at once, perfectly salubrious when heated to the ordinary temperature of the Bath and so inhaled. A practitioner, however, who can find therapeutic virtues in virulent poisons, and whose physiology teaches that what is naturally destructive of vitality is, at the same time, a natural restorative, may possibly have discovered some such law; for though it would outrage not science alone, but common sense, it would not, on that account, be less consistent with Physic dogma and practice. So far, indeed, from the Bath being faulty in construction, Dr. Millingen, Physician to the Sultan, considers it superior to the Eastern. "While the West," he says, "is indebted to the East for the origin of the bath, the East must thank the West for the *right construction* of the bath." And this "right construction" consists in ensuring the immediate flowing away of soapy slops and foul washings—in constantly maintaining a healthy purity of atmosphere by a complete system of ventilation, and a never-failing supply of fresh air with a sufficiency of moisture—though not in the form of visible vapour—*to act as an alleviative, and not as an irritant, on the delicate internal surfaces of invalids, who may be suffering from affections of the throat or chest.* Dr. Wollaston, who attentively inspected the Irish Bath, says—"I took an early opportunity of testing the working powers of the bath, and *found it to answer perfectly.* It is a genuine Turkish Bath *capable of producing all the effects desirable.*"—*Letter to Dr. Barter.*

The *fourth* error, and by far the grossest of all, is in the assumption that the atmosphere of the Bath irritates "internal surfaces," "robbing them of moisture," and so forth. A misconception of this kind, so easily corrected by the slightest inquiry on the part of any one desirous of ascertaining the truth, is scarcely pardonable. What, then, can be thought of the medical practitioner, whose business it is to study and know the truth, deliberately publishing a statement so directly the reverse of the truth, and that, too, for the purpose of prejudicing the mind of the community against a great therapeutic agency? Eminent Physiologists, and all medical men practically acquainted with the subject, are in direct opposition to Sir Dominic Corrigan on two points—the action of the Bath atmosphere on internal surfaces; and the comparative effects of dry and moist air on those surfaces.

If, when in a state of health, the action of the Bath atmosphere is "*likely* to be injurious on the lining mucous membrane of the thousands of air tubes ramifying through the lungs, robbing them of their moisture," &c., surely the practical effect of that atmosphere when the lungs are actually diseased—when the bronchial tubes and the ramifications of the trachea are inflamed, as in *bronchitis*—or when a patient is suffering under a "tearing, burning, lancinating" paroxysm, as in *angina pectoris* surely in such and all analagous cases the evil ought to be magnified a thousand fold? Yet, observe the contrast between vain ignorant theory and plain matter of fact. Dr. Goolden, Physician to St. Thomas's Hospital, London, who made the Bath a special study before *he* ventured to give an opinion on its merits, or on its atmosphere, in his Report, recommending the establishment of the Bath in connection with the Hospital, relates the following instructive case:—

> "A near relative of mine, who had led a hard life of exposure in various climates, and great fatigue in the Queen's service, and had retired on account of ill-health, suffered attacks of *angina pectoris*, became greatly emaciated, *dropsical*, and was seized in addition with an attack of *bronchitis*. His appetite entirely failed him, and Dr. Watson and I considered he was *rapidly sinking*. He had no regular sleep for several weeks, waking up in a state of alarm as soon as he dropped off to sleep, and he was then unable to walk across the room."

This is too frequently the pernicious course that is followed. Valuable time is lost, and disease is nursed into malignancy by poisonous Drug treatment, and then recourse is had to the Bath in the last extremity. But even in this extreme case note the result. Dr. Goolden continues:—

> "In this state, with Dr. Watson's approval, I took him to the Bath. I had great difficulty in getting him in and out of the carriage, and in supporting him down the stairs. When he was in the hot chamber he soon broke out into a profuse sweat, and said *he had not felt so comfortable for a long time.* He remained there *above an hour*, and I had great difficulty in persuading him to leave it, he felt so much relief. The *dyspnœa* (difficult breathing) was gone*: the palpitation of the heart had subsided to a natural action;* he rode home without inconvenience from Bell Street, Edgeware Road, to Chester Square, Pimlico; he enjoyed his food, and slept incessantly for nearly three days and nights. *From that time he rallied;* and, although still subject to attacks of angina, is in the enjoyment of comparatively good health, and capable of attending to his private business.—*Report to the Treasurer of St. Thomas's Hospital, Lancet*, January 26, 1861.

Now, what becomes of Sir Dominic Corrigan's idle speculations in the teeth of a fact like this? How could an injurious atmosphere possibly possess such a *restorative power* over a patient *rapidly sinking* from a complication of disorders, heightened, too, by a course of drug treatment?—a power that justified Dr. Armstrong in saying, "*the patient is raised, as by the touch of a magic wand, from weakness to strength by its application*"—how could this be if there was a scintilla of truth in the Corrigan theory? Has he any drug that could so act? With all the resources of the *materia medica* at his back, and all his own assurance in using them, did he ever produce a like effect? But we supply another case. Dr. Jeaffreson studied the Bath, and obtained valuable experience of what its atmosphere is capable of accomplishing. He says:—

> "I have known of greatly improved health in those attacked with *pulmonary disease* who have been employed as Turkish bathers. Many years ago, I was called to a person labouring under *pleuro-pneumonia* at the *point of death.* I had at the time much reason to fear that *tuberculosis* was at the root of his malady, and his protracted restoration and great emaciation did much to confirm my fear. A year or two subsequently he set up a Turkish Bath, *in which he spent many hours daily, with gradual progressive improvement in his general health, weight, and strength, and an entire immunity from chest symptoms.*"—*Address to British Medical Association, as President at Annual Meeting*, 1865.

Dr. Jeaffreson's experience is amply confirmed by other high authorities, as we will show in a subsequent chapter, when noticing the effects of the Bath on head, heart, and chest affections. By all who are practically acquainted with the grand therapeutic action of the Bath, it is prized as an incomparable agency, more especially in the early stages of pulmonary affections, when they are susceptible of certain relief, or in the correction and eradication of predispositions thereto. Nay, positive and grateful relief is afforded by the Bath in the last stage of *phthisical laryngitis*, when the "internal surfaces" engaged are in a hopeless state of ulceration and death is rapidly approaching. We took the Bath twice daily for two weeks with a friend who was wasting into the grave from *phthisical laryngitis*. Ulceration had extended upward until he was in such a deplorable state that, swallowing any fluid even, he compared to "swallowing fire," or "running a hot poker down his throat." He had racking fits of coughing occasionally, with large but difficult expectoration, which prevented sleep, and there was increasing emaciation and general debility.

In this hopeless condition, he resolved "to try what the Bath would do for him." How, then, did the "parched air," the "combustion of coke," and so forth, act on such fearfully diseased "internal surfaces?" Why, the very first Bath the poor fellow took he said "*he had not experiensed such relief for the last six months;*" and he frequently said, on subsequent occasions, when lying quietly breathing the so-called "irritating" atmosphere of the Bath, that it was the only cessation of suffering he experienced. He remained in the Bath, at least, an hour every morning and evening. From the moment he went in, and sometimes for two or three hours after he came out, the painful irritation of the "internal surfaces" subsided—the breathing became freer—the racking cough ceased—expectoration was less copious, and was effected without violent and torturing efforts—he drank water freely and with a relish, while he experienced a sense of general relief which inspired hope, cheered his spirits, and afforded a grateful intermission to his sufferings. Had he, in the early stage of the disease, submitted to and consistently followed the Hydropathic treatment, there is every reason to believe he would not have been cut off in the prime of his manhood; it was only, however, when his case was utterly desperate that he sought some relief from his sufferings in the Bath, and he found it.

But how could he possibly have found relief, if there was a particle of truth in the Corrigan theory? If the atmosphere of the Bath is "injurious," how came he to find it salubrious? If it irritates "internal surfaces" in a state of health, how did it come to exercise a soothing mollifying influence over all the most distressing symptoms of his hopeless condition? How was he enabled to swallow with comparatively no pain when in that atmosphere, and yet, when not in it, suffer excruciating torture in swallowing? In short, how came he to experience a sense of general relief—a strengthening and invigorating influence extending over his physical and mental condition, when in the Bath, if its tendency is to irritate, depress, impair, and weaken the functions of life?

Such experience, and it is, unfortunately, too common, demonstrates the difference between fact and theory concerning the action of the Bath, and it excites indignation to think of how the opinionative pride, the prejudices, and the wilful ignorance of some medical men stand in the way of such a beneficent agent being made generally available for the alleviation of human suffering. What a terrible truth Sir John Forbes gave expression to when he said—"Prejudices and errors may be ridiculous only in many departments of science—*in medicine they are murderous!*" Had Sir Dominic Corrigan relied less on the deceptive fallacies of his physic theories, and—as he was morally bound to do before pronouncing an opinion—instituted, on his own behalf, properly conducted personal investigations, he would have learned that, instead of *substracting* moisture from the "internal surfaces," a peculiar merit of the Bath is, that it *imparts* a soothing moisture to those surfaces when in a delicate condition and predisposed to disease, and even when actually diseased, and hence *its priceless value as an alleviative.*

But if Sir Dominic Corrigan does not appear to much advantage in his *therapeutics*, neither does he in his *physiology* shine very brightly when contrasted with any standard authority. He appears to be all at sea respecting the nature and effects of *moist* and *dry* air, and ascribes to the one what is properly applicable to the other! *Moist* air, vapour, he says, is a more preferable atmosphere for a Bath than *dry* air. "*All* the effects of excessive temperature on the body," say Todd and Bowman, "are much *more* apparent with a *moist* than with a *dry* atmosphere; because, in the case of a dry atmosphere, a greater amount of evaporation takes place, and hence a greater amount of heat is removed from the system. In England it would be impossible to sustain a vapour bath at a temperature of 110° or 120° for more than ten minutes, whereas the body may be, without danger, exposed for the same time to a *dry* atmosphere twice as high or more."—*Physiology of Man*, vol. ii., p. 422.

"In a *dry* state of the atmosphere, less duty falls upon the liver," says Dr. Miller, "inasmuch as free evaporation goes on from the surface both of the lungs and of the skin, and thus the temperature of the body is reduced. In dry weather, therefore, carbon may be emitted by the lungs in a larger quantity *without inconvenience;* but, when the temperature of the air is *high* and *loaded with moisture*, this source of relief is cut off, and an *oppressive* sensation of languor is experienced."—*Organic Chemistry*, p. 754.

"The foundation," observes Dr. Griffith, "on which his plausible but sophistical argument has been erected is, that Dr. Corrigan has all through *assumed* that the air breathed, say in an atmosphere of 150°, reaches the lungs with that temperature *unaltered*. In this erroneous assumption he has altogether *overlooked* the fact, that the temperature of the body is, by the conditions of the Bath (which very conditions he attacks), maintained at 98°, and, consequently, that the air entering the fauces, pharynx, and trachea at a higher temperature, parts with its excess of caloric on traversing this cooler medium, and is cooled down to the temperature of the body, long before it reaches the bronchial tubes and their minute ramifications; and, in so doing, so far from *robbing* the lungs and air passages of moisture, it actually *deposits* on their mucous membranes the excess of moisture due to its originally elevated temperature, and thus completely *reverses* the conclusion drawn by Dr. Corrigan."—*Dr. Corrigan's Objections Considered*, p. 5.

It is needless to observe that, in such cases as we have referred to, and, indeed, equally so in all cases of health or disease, it is in consequence of this grateful deposit of moisture, when the atmosphere of the Bath consists of dry heated air containing sufficient humidity, though not present perceptibly in the obnoxious form of visible vapour, that the Bath is enabled to exercise the peculiarly soothing and genial influence invalids so happily experience and enjoy. Whereas the moist vapourish temperature, which the enlightened physiology and therapeutics of the thrice President of the College of Physicians of Ireland with such scientific and practical wisdom contends for, would have all the deleterious consequences that are the inseparable attendants of physic practice—it would have the effect of increasing the temperature of the body, of congesting internal parts, of retarding excretions, of corrupting the blood, of deranging the functions of all the organs of Nutrition, and of debilitating the whole system. For, as Carpenter says, "*a moist heated atmosphere obstructs the elimination of excrementitious matters from the blood, through the lungs and skin,*"[1] and we have seen what serious consequences must inevitably follow from obstructed excretions and blood impurities.

We now come to the fifth error Sir Dominic Corrigan so ingeniously managed to squeeze into the two sentences we quoted. He says:—

> "Every one almost, in his own person, has at one time or other experienced the difference between the impressions of *dry hot air* on an irritated or congested part, compared with the soothing effect of *warm* vapour arising from a fomentation or poultice. What is true of external parts is *equally true* of internal surfaces, &c."

The philosophy and the logic of this passage may be thus expressed—As the Bath atmosphere consists of "hot dry air," it has not the soothing effect on an irritated or congested external part that warm vapour arising from a fomentation or poultice has, *ergo*, it must have an injurious effect on such parts, and also on "internal surfaces," because "what is true of *external* parts is equally true of *internal* surfaces." This is as sophistical as all physic theories, though few hang more plausibly together; but it has the inherent vice of all such theories—it is based on a *petitio principii*—on an utterly false assumption, as all experience testifies. It is not true, but exactly the reverse of truth, that the Bath atmosphere fails to exercise a soothing healing influence on irritated or congested external parts. This is just one of the peculiar properties it does possess, and in a most remarkable degree too. It soothes and heals with a power and promptitude, to compare with which the warm vapour of a fomentation or poultice betrays extreme ignorance and downright folly.

Take the very worst cases of external irritation or congestion—chronic ulcers, for example—that have withstood all the resources of physic-craft, and what do we find? Why, that when all physic means have utterly failed, they yield readily to the healing influences of the "dry hot air" of the Bath. Dr. Haughton, who has had a large experience, says:—"*In chronic ulcers* of the legs, at present *the bane* of hospitals, *complete cures* may often be effected, without doing the system an injury, by removing the old drain of morbid matter; for the Bath leaves *nothing to drain off*"—not even the poison of physic-doctoring, for it eliminates all morbid and morbific matters that are hostile to vitality.

Take, again, the case of extensive injuries to the external surface caused by burns or scalds—cases in which physic practice is wofully at fault. The usual course is to bedaub with dirty ointments, to encourage blisters, excite great pain, create extensive sores, run the danger of suppuration, and so manage the scientific doctoring that scares are produced, which remain indelible for life. But, in such cases, what does the "dry hot air" of the Bath do? Why, the curative effect is truly marvellous. "In burns and scalds the patient," says Dr. Haughton, "can at once be taken to the tepid room of the Hospital Bath, 120°, and the irritation of clothing to the injured part be removed, without exposing the body to cold, whilst the rest of the skin does duty for the affected part."—*The Use and Abuses of the Turkish Bath*, p. 13. But the sooner the injured surface is exposed to the high temperatures of the Bath, above 200°, the more certainty will there be that *no blisters will rise*—that, if any do rise, they will *speedily collapse*—that, under the genial influence of the high temperatures, *all pain will vanish*—that Nature will instantly concentrate her power on the injured part, and rapidly promote the growth of new skin to replace that destroyed—that all sores and dangers of suppuration are thus avoided, while an indelible cicatrix to disfigure for life the face or neck, perhaps, is thus rendered impossible.

This is what Nature does when assisted by means consistent with her own laws, and does, too, *cito certo et jucunde*—speedily, certainly, and pleasantly, which Hippocrates said was the perfection of the Healing Art the true and good physician should always aim at attaining; but it is a perfection that no physic practice since his day ever yet attained, or ever can possibly attain, so long as the laws of Nature remain unreversed.

What we have said about ulcers, burns and scalds, applies with equal force to all other external cases of irritation or congestion—to affections of the joints, rheumatism, gout, cutaneous disorders, &c.; and it argues a great want of physiological intelligence, and a culpable ignorance, or worse, on the part of any medical practitioner to advance such frivolous and groundless objections for the purpose of discouraging the use of the most undoubted, the most powerful, and the most unerring therapeutic medical science can command for the relief of human misery. In a far different tone have men of *undoubted* scientific eminence in the profession hailed this great therapeutic. It is, said Dr. Gosse of Geneva, "*the real panacea for the larger* *portion of the evils that assail mankind*"—it is, said Erasmus Wilson, "*to the individual man*, comprising his liver, kidneys, and skin, *that which the sun is to the world and its inhabitants*" —"as a physician," said Dr. Thudicum, "I feel placed in my hands *the most powerful and certain, and, at the same time, the most safe and agreeable therapeutic agent in existence.*" But, exclaims Sir Dominic Corrigan, "*it a'nt me*, and I'll have none of it!" It irritates internal surfaces!

As a matter worthy of candid inquiry and discussion, it would have been quite proper had Sir Dominic Corrigan published any well-considered objections he entertained against the Bath; but his opposition wears a very different aspect, indeed, when we look below the surface and judge of it by the light of his subsequent conduct. He occupies the position of what is called "a representative man." He has been thrice elected President of the College of Physicians; he is a member of the Medical Council, and is looked upon by some people as a "great medicine"—as one of the leading authorities of the Dublin School of Drug Medication. Yet what was the course adopted by this man of high position in reference to his objections against the Bath? He published them in the *Dublin Hospital Gazette*, over which he had control as a proprietor, and then exercised that control to *prohibit the publication of any reply whatever!* Dr. Barter tendered satisfactory explanations to the editor, who expressed his willingness to insert them, but Sir Dominic interposed, and the publication was prohibited! In fact, his ignorance was so gross and glaring that he feared the contrast of the simple truth beside it. But what respect can be entertained for a man in his position—with his professional obligations to study every proposed remedial agency, who would act in such a manner. He not only remains dogged and self-sufficient in his own ignorance, but he does all in his power to shut out light from others.

It was thus obvious that Sir Dominic did not propound his objections with an honest view to elicit truth, but to gratify his own vanity, and injure, as far as he possibly could, an undoubtedly powerful therapeutic agency, the existence and success of which is an eloquent protest against the baneful system of physic which he so profitably follows. Explanations were also offered from other quarters, but he paid no attention to them; while Dr. Barter, to test his desire for truth, offered an opportunity of examining personally the construction of the Bath, and testing its working and merits, or of deputing any person he pleased to do so for him, but his zeal for knowledge, his anxiety for the advancement of medical science, was unfortunately not so ardent as to induce him to embrace the offer. The least that can be said is, that such an evident desire to suppress discussion and stifle inquiry is not reconcilable with the interests of truth, and cannot be considered creditable in any person who aspires to instruct and lead medical opinion, or to obtain reputation as a competently informed practitioner. Prejudices and jealousies are foreign to the truly philosophic mind, and are certain to injure the credit of those who evince a disposition to cherish them at the expense of truths established by experience.*

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* Dr. Griffith published a letter in which he stated the facts particularly respecting the suppression of all explanations concerning Sir Dominic's reckless aspersions of the Bath. He thus relates what took place:—"Although the editor of the *Hospital Gazette* had gone over with Dr. Barter his reply to Sir Dominic's statements, and, pronouncing it unobjectionable in tone, had agreed to insert it, yet, when it came before the proprietor or proprietors of the journal, its insertion was refused; but this is not all that happened, as when I was driven by the above conduct of Sir Dominic and his *confreres* to publish the entire attack and answers thereto in the form of a pamphlet, entitled the '*New Irish Bath versus the Old Turkish*,' &c., I went to the office of the *Gazette* and presented an advertisement of the pamphlet for insertion in that journal. The clerk received the advertisement, and gave me a receipt for the amount, but what was my astonishment the day after the publication of the number in which the advertisement should have appeared to receive a letter returning me the price of the advertisement with a curt announcement that *it could not be inserted.* I was afterwards informed that it had actually been put in type, and some numbers of the journal containing it printed, when, having met the eye of the authorities, they were destroyed, and the advertisement suppressed. Such, Sir, is an example of the spirit of fair play, with which

Sir Dominic has complained that men get into the medical profession who could not pass an examination for the situation of a letter-carrier, and we believe it; but he illustrates in his own person that there are various ways by which a man may rise to distinction, when in the profession, and yet not possess the prime essential that is the foundation of all solid eminence in medical science—*an honest desire to attain truth.* We take him as a fair representative of the physic doctors by whom the Bath, and Hydropathic practice generally, is studiously misrepresented and decried—indeed, it is with this view that we notice him at all—and we appeal to the common-sense of the public, how can the great benefits the Bath is capable of conferring in relieving disease and alleviating human suffering be made available, while patients are irrationally induced to consult and be led by such unscrupulous authorities? We know, indeed,

> " 'Tis distance lends enchantment to the view;"

and so it is, credulous dupes believe that metropolitan drug practitioners, who manage to keep themselves before the public, must *ex necessitate* possess a wonderful power over all human ailments. It is such practitioners chiefly who grossly misrepresent the Bath and speak all manner of evil concerning it—warning their dupes and victims that it would be destructive in their cases, advising them to travel abroad, or to do anything rather than place themselves within its healing influences. We are familiar with numerous cases of this kind—cases where, attracted by the tinsel of a name, men labouring under ailments that would easily have yielded to the simplest forms of Hydropathic treatment, have been absolutely drugged into serious disease, and yet, after months—nay, years—of protracted suf-

reforms in the medical art (and what are they so much required in?) are received, and this is but a small instance of the difficulties and opposition which the establishment of that great boon to humanity (the Turkish Bath) has had to struggle through in this enlightened country. Such is a specimen of the zeal of the heads of the medical profession for the improvement of their craft, and the relief of suffering humanity."

fering, they have at last—*in despite* of the threatening predictions of evil consequences uttered by those very practitioners—resorted to such treatment, taken the Bath, and entirely recovered!

It is cases of this kind, and they are numerous enough, that excite indignant feelings against the wilful ignorance, the inveterate prejudice, and too often the sordid motives of drug physicians, who thus cruelly tamper with human life and health, in utter disregard of the serious responsibility incurred. It is the primary duty of every man, who holds himself out to the public as a medical practitioner, to study, with an unprejudiced mind and an honest desire to attain truth, every rational means that may be proposed as remedial in disease; and the practitioner who has the opportunity to do so and fails in this duty, thereby neglecting means that might enable him to be instrumental in restoring health and saving life, can never be considered a conscientious physician. But if, in addition, while he refuses so to inform his ignorance, and with a view to conceal it, or from any other motive, he imposes on the credulity of his patients, wilfully misrepresenting and belying any mode of treatment he has not studied and tested, he shows himself destitute of any proper sense of the moral obligations his profession implies, and, disguise it as he may, his rectitude is not elevated above that which inspires the vulgarest quackery. And if such be the duty incumbent upon honest practitioners, in a greater and higher degree is it incumbent on those who occupy the position of teachers in schools and colleges, yet notoriously it is a duty seldom conscientiously performed.

As we before observed, it is largely owing to a sad deficiency in public intelligence that such practitioners are enabled to carry on the system of successful imposture which their practice involves. No man can acquire professional fame and eminence as a surgeon who is not skilful and accomplished—who has not sterling merits that can be confidently relied on; therefore, repute is a pretty fair guide by which to judge the qualities of a surgeon. But with a Drug Physician the case is altogether different—they who rise highest are generally the most accomplished empirics. It has been said—"Scrub a Russian, and you will come on a Tartar," with more certainty you may say—Denude a Drug Physician of his pretentious airs and empirical graces, and underneath you find nothing but the rankest charlatanism. In operative surgery, the hospital practice which large towns and cities afford is favorable to the development of a high order of skill, but in drug practice an apothecary's apprentice at the Land's End, at John O'Groat's House, or at Cape Clear, is just as competent to poison with drugs as any fashionable physician in London, Edinburgh, or Dublin; and the chances are, he has quite as much accurate knowledge about the nature of disease and its rational treatment. Assuredly he can commit manslaughter equally well, though he may want the dexterity that practice imparts to work *secundum artem* with an agreeable plausibility.

## CHAPTER XVI.

*The fear of catching cold from the Bath illusory—Cold bathing, its danger as commonly practised—The Bath fortifies the system against cold—Opinions of medical authorities.*

THE *fear of catching cold* is a very popular and prevalent objection to the use of the Bath. There is nothing more common in conversation on the subject than to hear persons who only know the bath by general repute express apprehensions as to the danger likely to follow the rapid transition from the hot chamber at 140° or 150°, where perspiration has been profusely excited, to the cooling chamber at a temperature of 50° or 60°. To those not acquainted with the action of heat and cold on the human system, such an objection may appear, at first sight, plausible enough, but there is absolutely nothing in it.

It is within the experience of almost every one that, in ordinary cold water bathing, the maxim established by professional and popular ignorance is—"*Never venture into the water when in a heat—cool first*"—a practice which cannot be too severely deprecated as highly pernicious, most detrimental to health, fraught with dangerous tendencies to induce functional derangements, and develope hereditary predispositions to disease. We believe, indeed, that an incalculable amount of disease is induced annually by the injudicious way in which cold bathing is conducted by youths at school, and by visitors indiscriminately, who usually resort to sea-side watering places. Could the balance be fairly taken between the good and evil effects so produced we fear the latter would largely predominate.

Multitudes, however, indulge with unhesitating confidence in cold bathing, whose ignorant prejudices would be excited by the mere proposal to take a Hot-air Bath, as being infinitely more salubrious in its influences, combining as it does, all that is beneficial in cold bathing, with a great deal more besides. The cold bath undoubtedly possesses great merits as a curative agent in certain cases, but it is an agent that requires great caution in its use, as having very dangerous tendencies, though this fact is not yet generally accredited. As Sir John Forbes observes:—

> "Like all powerful and valuable remedies, its employment requires great caution and discrimination—first, as to whether it should be used at all; and secondly, as to the form and mode of using it. It must be confessed that in a vast number of cases *no such discrimination is practised;* and it will not be doubted by any physician resident in the vicinity of the sea that in the case of no other remedy are *greater mistakes committed and greater mischief produced* than in the use of the cold bath."—*Cyclopædia Practical Medicine, Art.* "*Bathing.*"

In cold bathing, however, the safe rule is not to *cool first,* as popular prejudice enjoins, because a healthy re-action is commonly proportioned to the vigour of the circulation in general, and more particularly to that on the surface of the body—to the warmth of the skin and of the extremities previously to immersion. Without the necessary re-action a complete and prolonged depression of the powers of life may be the consequence, or even life itself may be extinguished, for numerous instances are known of individuals having been killed by cold bathing when improperly indulged in.

We have already noticed how the untutored Indian discovered, by the sound philosophy of experience, that the only way to ensure *not* catching cold, after taking his rude form of sweating bath, was by plunging, when *reeking with perspiration,* into water the temperature of the atmosphere. The Irish sweating-houses were constructed near rivers, ponds, or lakes for a similar purpose, and the Russians rush out of their bath and roll in the snow without any dread of cold. All this can be done, not only with perfect impunity, but with positive advantage, while *it is physiologically impossible to take cold.*

The reason is this. When heated naturally by exercise or artificially by the action of the Bath, the system is fortified with an extra amount of caloric to withstand the sudden transition to and shock of cold. But if, when heated, you wait until you cool, the very effect of cooling, abstracts caloric from the system, and thereby renders it less able to resist the transition, and hence the liability to be injuriously affected. Thus it is, that, when in a state of profuse perspiration, a plunge into the coldest water can be endured with entire impunity, and not only so, but also with pleasure and benefit. An excellent authority, Dr. Leared, observes:—

> "One remarkable change of opinion has resulted from the introduction of the Turkish Bath. Not five years ago, it was generally supposed that to pass, while in a state of profuse perspiration, into water the temperature of the air in winter, must be injurious or even highly dangerous. The dread of the cold water to the heated skin was sometimes carried to a ludicrous extent. I well remember, when a schoolboy, having been taken to bathe with other boys, and, if heated by exercise, being compelled to wait in a state of semi-nudity until the point of regulation coolness was attained before entering the water. This refrigeration was, of course, *the best possible foundation for bad results from bathing.* It remained, however, for the Eastern Bath to prove that the most profuse perspiration may be suddenly checked, not only *without risk*, but with *positive advantage.*"—*Papers on the Treatment of Phthisis by the Turkish Bath, Lancet*, Nov. and Dec., 1863.

Dr. Sheppard in his work on Bathing endorses this statement to the fullest extent, and so, also, will every well-informed professional gentleman. "The vigour of the constitution and the heat of the body," he says, "are the true measure of capacity for cold." Spenser Wells, lecturer on Surgery in the Grosvenor School, London, an equally high authority, remarks:—

> "One of the most common objections raised to the Bath is the fear that the transition from a heated room to the open air may give cold. But *experience proves that this fear is groundless*, and a little reflection will show *why* it is groundless. The skin of the face, which we habitually leave uncovered and exposed to rapid alternations of heat and cold, receives no unpleasant impression from a current of cold air after leaving a hot room. But the rest of the body is kept covered up from the light and air, and un-

in cold bathing, whose ignorant prejudices ıbility, and its
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observes:— ıre—in other words, with un-
—*Lecture on the Turkish Bath*,

"Like all powerful describes the ordinary process of
great caution and discr ıre warmed by exercise, perhaps somewhat
all; and secondly, a the same time, the skin is bedewed with perspir-
fessed that in a v pired fluid evaporates, producing chill; and the
and it will not b a shock to the nervous system and to the whole
sea that in the that results in the reaction known as cold."—*Eastern*
*greater mis* &c., p. 135. How different this from the action of the
*Practical* bath in which no evaporation of perspired fluid capable of pro-
Ir chill can possibly take place, and consequently no shock
as r can be given to the nervous system calculated to produce an in-
m jurious re-action. On the contrary, the whole economy is forti-
fied to resist the sudden transition from perspiring heat to ex-
treme cold, and, at the same time, prepared to receive the
sensation of the shock as pleasurable.

Thus, Dr. C. J. B. Williams, in his *Principles of Medicine*, says—"Susceptibility to the morbid effects of cold is to be diminished by means tending to invigorate the capillary circulation, especially when they are such, at the same time, as serve the process of re-action, which is Nature's ordinary method of resisting cold." This is exactly the way in which the bath operates; and hence Erasmus Wilson's emphatic declaration —"The bath properly conducted—and improperly conducted it is not the bath—*the bath cannot give cold.*"

Dr. Haughton who has made the subject a special study, gives his valuable experience on the subject in these words:—

"With regard to taking cold after bathing, it is only necessary to consider that every Turk is obliged to go to the bath regularly, without respect

her or season, to understand how people become accustomed to this
source of danger, which really is *an imaginary one.* Count
posed himself to cold after bathing for the purpose of ascer-
nd found the effect quite the contrary, namely, that he *could*
*of inclemency which before would have laid him up;* and I
experienced the same thing when in Constantinople,
es in temperature are exceedingly common.
the Bosphorus a long way, to a bath unfrequented by
oing out, that a sultry morning had been succeeded
, and I had no way of returning but by an open boat
ch *I got thoroughly chilled, but did not take cold.*
s much popular error on the subject of taking cold, notwith-
g all that has been written by *the first* medical authorities. It is
posed that when the body is warm it can worst support a rapid abstraction of its caloric. But, however true this may be when the heat has been obtained *at the expense of nervous energy*, it is far from *being true* of that heat which is communicated to us *from without*, and which is, in truth, an *available surplus*, which we can afford to lose in addition to what we could have safely parted with when the surface of the body was of the natural temperature. Besides this, after a bath the capillary circulation is more vigorous, and we are, therefore, in a better condition for *resisting* cold than if we had not bathed, *as daily experience demonstrates.*"—*Essay on Hot-Air Baths.*

Thus so far from the Bath having a tendency to give cold, or to heighten the susceptibilities of delicate constitutions to catch cold, *its habitual use* is the very best way yet discovered by which the system can be trained and inured to withstand climatic variations. And so it is, also, that to those who are pre-disposed to bronchial and pulmonary affections the Bath is a boon the value of which no language can adequately express, By its judicious and skilful application, constitutional tendencies which, if permitted development, would make life while it lasts miserable, can be, if not eradicated, at least counteracted by timely precautions, and kept effectually in subjection.

The *habitual bather* is never annoyed by nervous fears of cold. He has no need to take those perpetual precautions to guard against its influences, which, constitute the torment of so many lives, and which, from their use, *necessarily increase morbid susceptibilities,* because the skin of the habitual bather is restored to something approaching its normal condition, is strengthened to perform its natural functions, by means of which a tonic influence is exercised over the nervous system, and the whole economy is fortified to resist the abnormal susceptibilities to cold, which the highly artificial habits of our civilisation impose on us.

"It is impossible," says Erasmus Wilson, "to avoid the conclusion, that the close clothing of the body from the moment of birth, and the continuance of the process throughout our lives, must tend to prevent the proper and healthy development of the skin, and also to debilitate it, and that the opposite course of exposing the skin to the air, and promoting its natural functions by means of the bath, must have the contrary effect of hardening and strengthening the skin, and rendering its functions more perfect." A lady, who was always catching cold from the slightest exposure of her skin to the air, said to her brother, who was a physician—"How I wish that my skin were all face." His sensible reply was—"*Try and make it all face.*" But the task was irksome and difficult, for the Bath was not then known in these countries, while by no other means could such a purpose be accomplished so easily, so perfectly, and so pleasurable as by the habitual use of the Bath.

There is only one caution which it is necessary to give in taking the Bath, as regards liability to catching cold. "Properly conducted, the bath cannot give cold, and improperly inducted, *it is not the bath,*" is the sound dictum of Erasmus Wilson. Now, an essential point in taking the Bath properly is, *to cool thoroughly before proceeding to dress.* By doing so the full benefit of the Bath is obtained; subsequent perspiration is prevented by the closing of the pores; and the *only* liability to take cold from the evaporation from open pores, effectually guarded against.

It is difficult to get some people to understand this. We often meet persons accustomed to the Bath, who, ignorant of its physiology, foolishly imagine they could take cold during the cooling process. They would like the cooling chamber to be of a higher temperature, whereas the very best temperature is that of the atmosphere in the open air, whatever it may be even in the depth of winter. In fact, if the cooling room was altogether roofless, were it not for rain and draughts, its action would be the more beneficial. But under no circumstances can the cooling process, properly conducted, give cold.

Of course all bodily systems are not alike. Some persons cool more rapidly than others, but that makes no difference whatever as respects the temperature of the cooling room. It is alike applicable and alike safe for all healthy constitutions, no matter what the temperature may be, and the only safeguard necessary to be observed as an invariable rule is, to cool perfectly totally irrespective of what time may be consumed in the process. Thoroughly cooled, dress quietly, and go out into the open air fearlessly, for you have acquired an impenetrable shield against cold. A moderate walk, in favourable weather, after the Bath, is calculated to do good, just as before taking the Bath a smart walk facilitates its action. Of course it is understood that we are alluding to ordinary healthy bathers, and not to invalids, who should in all cases follow the directions of competent advisers.

We have thus endeavoured to dispose of the alleged dangerous tendency of the Bath to give cold, and we have seen that those prejudices are in antagonism to the unerring laws of physiology, and, therefore, must always be in antagonism to experience. Two conclusions are irresistibly forced on us—

First—That the bath, properly conducted, cannot possibly give cold, and,

Second—That by no other means can the human system be so effectively fortified to resist the injurious effects of cold and of climatic changes, as by the habitual use of the Bath.

# CHAPTER XVII.

*The supposition that the Bath weakens and debilitates opposed to Physiology and experience—The fantastical objections of Dr. Richardson.*

A VERY common prejudice against the hot air Bath is, that it has *a tendency to weaken and debilitate*, and therefore, must necessarily exercise a depressing influence on the vital organism in health, but more especially so in disease. We frequently hear people in ordinary health say—"my constitution is not very strong. I am thin enough already, and have no substance to spare. The profuse perspiration that I hear takes place in the bath would sweat the very life out of me."

Such like observations from persons who have had no experience of the Bath, and are ignorant of its physiology, may be excusable, as they arise from an erroneous idea of the effects produced on the human system by the action of heat—effects which are, as yet, very imperfectly understood even by enlightened physicians. The most satisfactory answer, however, that can be given to observations of the kind—indeed, to all objections to the Bath—is, that *experience has so far demonstrated the complete falsity of every theory and speculative conjecture that attribute to its judicious use injurious tendencies.* Reasoning from pre-conceived opinions based on imperfect knowledge, no matter how logically the process may be conducted, can be of no value whatever when opposed to the well-ascertained facts of an intelligent experience. Nature cannot err, and if we find that, as a general rule, the Bath strengthens and invigorates, we must conclude that its action is designed by Providence to be beneficial, *though* thousands of theorists affirmed the contrary.

But, at this point a class of theorists start up to teach us a new philosophy. They affirm that *experience is not a safe guide!* —that we must not repose confidence in our own sensations —that when we experience relief from the Bath, and feel that it really does us good, we are to regard our feelings not as evidence of "healthful exhaltation," but as more truly indicating a state of "ruinous depression!"

This marvellous theory we find propounded by Dr. W. B. Richardson in his address to the Provincial Medical Association of England in 1861. The use of the Bath as a therapeutic agent under the control of a Physic Doctor he would permit, but its ordinary use "as a social enjoyment or luxury"—wonderfully preservative of health and preventive of disease—he deprecates as having ruinous tendencies! The very sensation of "great pleasure and satisfaction," which attends the administration of the Bath is, in his opinion, "*a misfortune!*" He philosophically reasons thus—

> "In the palmy days of blood-letting, when every one was periodically bled, the argument in favour of the practice was, that it produced for a time a lightness and an agreeable feeling. The respiration of nitrous oxide gas, and even in a certain stage of opium-narcotism, the same mental liberty is experienced. But what is the meaning of this sensation? Is it one of power? I believe not. I believe it is simply a transitional decline."

Observe how this learned theorist reasons, with a consummate confidence, on the palpably false assumption that the action of the Bath on the human system is exactly similar to the action of a death-dealing phlebotomy, and how irrationally he concludes, though in keeping with his premises, that, therefore, the injurious consequences must be the same. There is in his mind a perfect accord as between similar causes producing similar effects, though the difference between blood-letting and the Bath is as great as between the action of a deadly poison and of wholesome food. Blood-letting, which, unfortunately, for the countless thousands it consigned to premature graves, the profession, until recently, universally practised, had the effect of *abstracting* from the system the vital fluid on which its very existence depends, whereas the action of the Bath is to *purify and replenish* that fluid, and maintain it in a normal condition of healthful vitality. And yet Dr. Richardson avers there is a perfect similarity of action between blood-letting and the Bath—both produce "a lightness and an agreeable feeling," which is an evidence of "transitional decline!" In the same way nitrous oxide gas, opium and other deleterious agents taken into the system give, for a time, "sensations of lightness and ease," to be followed by injurious depression; and because the Bath also imparts sensations of lightness and ease, its use must also be injurious to health and life!

But the doctor transcends himself when he proceeds to descant on the debilitating influences the Bath is calculated to exercise over health. He absolutely ventures so far as to assert that it has an inevitable tendency to deteriorate the physical and mental qualities which are the glory of the English people! This certainly is a most portentous theory, and consistently with it he predicts a direful fate for England should the bath ever become a national institution, to be used "as a social enjoyment or luxury." He does not, indeed, go to such an extreme as some of his profession did in reprobation of Jenner and vaccination, when it was asserted that the human species would be transformed by vaccine ichor into cows and bulls! But the doctor holds that the Bath will do nearly as bad. He refers to the names by which the bath is generally known, and exclaims—"*Turkish and Roman are words of ill omen.*" The Romans, degenerating, lost the empire of the world, and the doctor's reading of history tells him that the Bath did it all! The Turks once threatened to overrun Europe, but are now sunk in the atrophy of national decay, and the Bath is alone to blame! Therefore the learned theorist patriotically lifts his prophetic voice to warn his countrymen against the fate of the Romans and the Turks, should they permit the bath to become—as it is fast doing—a national, nay, a household institution!

*Starting* with the ridiculous assumption that the use of the

Bath is to supersede all healthful out-door recreations, he proceeds in this rhapsodical style—"I predict that *whenever* Englishmen give up their active occupations, and in slippered pantaloon luxuriate daily in a bath to rid themselves of the products of exertion, *then* this country will have passed the zenith; *then* there will be no great hero to bid every man do his duty, no man to do the duty, and no England for which the duty should be done!" Surely it is not worthy of a sober professional mind to gravely indulge in such childish predictions? It is not even historically true that the Bath caused the degeneration of the Romans as a nation, though its use was much abused by the epicurean citizens of Rome, nor is it a fact that the Turks, as a people, have degenerated.

But it would be "breaking flies on a wheel," to notice more seriously such foolish speculations, though it is just as well an intelligent public should be acquainted with the sort of objections some medical writers urge against the Bath. When they cannot oppose its utility philosophically on the basis of experience, they take refuge in the regions of romance, and seek to delude those who put trust in them by conjuring up fanciful conjectures. No one in his senses ever proposed that the Bath should *supersede* out-door exercise, or that it could ever become a fitting substitute for the manly recreations which are a characteristic of the British people. Dr. Cummins very clearly expresses the great advantages to be derived from the habitual use of the Bath, in correcting the morbid tendencies of our artificial modes of life. He does not propose that the Bath should *take the place* of exercise in the open air, but he contends, and all properly informed minds will agree with him, that for those who cannot take a sufficiency of exercise in the open air, the bath offers inestimable advantages. And why?

> "Because," answers Dr. Cummins, "man has acquired artificial habits, because civilisation has enabled him, in a great measure, to escape from the decree, which became a law of his economy after the fall, that 'in the sweat of his brow man should get bread,' because exercise of the mind has, to a great extent, superseded that of matter, because many poor creatures can never

'Feel as they used to feel,
Before they knew the woes of want,
Or the walk that *costs a meal.*'

And further, because, combined with absence of the physical exercise, which is the natural stimulant of all the organs, absorbent and exhalent, civilisation has tended to associate mankind in large communities, and to multiply cities with all the contaminating influences thereby engendered. . .

"The scientific physician, who sees in the structural changes revealed by *post-mortem* examinations, and demonstrated by the microscope, only local manifestations of general disorder of the system, induced by blood-poisoning, can alone be in a position to appreciate such a powerful prophylactic, such a valuable substitute for the active exercise which quickens all the bodily functions, as the Turkish Bath. *I do not mean*, however, *to recommend the bath as at all equal to active exercise;* a day's hunting, shooting, or coursing in the country, will do the man of sedentary habits more good than *many baths*, because these sports call the lungs as well as the skin into active play, and cause the inhalation of large quantities of oxygen, which is the true chemical antidote to the hydro-carbons. . .

"But every medical man of experience knows *how difficult, nay, impossible, it is to combat the business habits, or, still worse, the indolent habits, of the majority of city men.* They may, indeed, be induced to take what is called a 'constitutional walk,' but it is a fallacy to suppose that *any exercise short of that which quickens the circulation and respiration, and opens the pores to free perspiration*, can be a sufficient antidote to the poisonous influences generated in cities, or by habits of intemperance."—*The Turkish Bath*, p. 9.

Intemperance not in drinking alone but eating also; for in the middle and upper ranks of society far more evil is wrought in one day by intemperance in eating—as regards both the quality and quantity of food consumed—than by excessive indulgence in pernicious drinks. It is historical how past generations, famed for deep potations and riotous living, were enabled, by *habitual outdoor exercise*, to escape, with comparative impunity, from the ill effects that would otherwise have been experienced. But in our day, a superabundance of dainty dishes, rich soups, and pastry poisons, have superseded the plain food and deep potations of our fathers, till it becomes quite appalling to reflect on what a human stomach is now required to perform daily in the way of digesting incongruous meats. Then sedentary habits, imposed by business avocations or indolence, with the exhaustive wear of brain, consequent on the keen competition that prevails in every walk of life, involves a gradually increasing tax on the constitution, and hence the constant tendency to functional derangements, which have become so marked a feature in our modern pathology.

It is as an assistant to impaired vital functions that the bath possesses invaluable properties. It preserves health, restores health, and prevents disease, when judiciously employed, and this, common sense will tell every one, it could not possibly do were its tendencies to weaken and debilitate.—"The bath," says Dr. Thudichum, "is an engine for *the production and maintenance of health*, and I would express my conviction that I consider it to be such, and do not desire to limit it to the destiny of a medical instrument. *It is for the benefit of all men;* the sick, however, will have *a large share of its blessings*."—*Letter in Manual of the Bath*, p. 282.

It is a mischievous error to suppose that the perspiration induced by the bath weakens. . It does nothing of the kind. The more readily perspiration is excited, and the more freely it flows, the greater the assurance that the Bath is operating beneficially. Dr. Carpenter observes—"That perspiration has no weakening effect in itself, except by the diminution of the water in the blood, which may be *re-supplied* from the stomach, appears from the fact that if persons exposed to high heat make no bodily exertion, they experience no loss of vigour *if copiously supplied with cold water*—such exposure may induce very much *to invigorate the system*."

Perspiration eliminates effete and poisonous matter from the system; by drinking cold water the blood is replenished with wholesome material in exchange, and consequently the whole economy is invigorated. Such is the simple action of the Bath, and hence the sensations of ease and enjoyment its administration produces. But perspiration does far more when there is congestion of any internal organ. "It will," as Dr. John Armstrong declares, "bring pounds of blood to the surface which were suffocating some internal organ; it will balance the circulation sooner than any other means I know. The patient is *raised*, as by the touch of a magic wand, *from weakness to strength*." And this is done not only without fatigue, but with a peculiar enjoyment, for, as the same authority observes, the hot-air Bath differs from the warm water Bath most essentially in this respect—"the fatigue from a hot water Bath is *frequently fatal*, the hot-air Bath *does not fatigue*."

It is by reasoning on the very erroneous assumption that a hot water and a hot-air Bath are similar in principle and identical in effect, that many medical practitioners are led so egregiously astray. As Dr. Griffith observes, "When medical men tell their credulous patients that the Turkish Bath will only *weaken* and *debilitate* them, they simply exhibit ignorance respecting it. Taking their ideas from a *warm water bath*, in which alone their experience consists, they logically conclude that *a bath totally different* in its effects must produce the same results."—*Life in a Tub*, &c., p. 59.

Dr. Sheppard, who having studied the therapeutic properties of the Bath, succeeded in introducing it at Colney Hatch Lunatic Asylum, of which he is superintendent, says, respecting its alleged exhausting effects—"There is a large class of persons who object to the use of the Bath, on the *supposition* that it is exhausting. 'We are already sufficiently feeble and exhausted; we do not want any further reduction of vital force.' But *the Bath is not exhausting*, because its salutary influence is not measured by its power to produce abundant sweating. Such a supposition can only have arisen from an entirely mistaken view of the nature and character of the Bath. It does, indeed, produce 'purgation of the skin,' in obese and hydræmic subjects, and, occasionally, a temporary sense of exhaustion; but in spare, nervous, and delicate subjects its effect is altogether of a different kind. There is little sensible loss of matter, but an *invigoration* arising from the contact of the now unscarfed skin with particles of caloric, and from the newly-acquired power of *drinking in oxygen through channels previously closed up*."—*Bathing*, &c., p. 21.

Dr. Balbirnie, who has had a large experience, and has written with great practical knowledge of the Bath, says—"It is supposed to be only suitable for strong constitutions. *This is a complete mistake.* The weakly, on the contrary, as they have more need of it, are, perhaps, more benefited by it. Its influence as an instrument of training—as a means of physical development—is the least questioned and questionable. *Powerfully aiding nutrition,* it manifestly promotes *growth* and *strength.*" And again—"The allegation that perspiration is a weakening process is a fallacy that hardly needs demolition. Sweating, as accomplished *by drugs* (sudorifics), we admit is a *debilitating drain.* So is the vapour-bath as used in the *bungling way common in our old bath establishments.* But properly evoked, and followed by tepid and then cold ablutions, it is, on the contrary, highly tonic and invigorating. In the Turkish Bath, the patient lies full-stretched, in perfect repose, on couch, bench, or *dureta.* Nothing of the *normal* constituents of the body is abstracted save the saline and watery portions of the blood. The water is replaced by absorption from the stomach as rapidly as it is given out; for when the drain becomes excessive, the supply is proportionate. And here, be it well observed, it is only *in very pure systems* that the water, welling out from the pores, comes away pure. It is far otherwise when the body is impure. Not only is the water oozed out by the pores, but the atmosphere all round is tainted by the eliminated products and exhalations of disease."—*The Sweating Cure,* p. 28.

It is this elimination of blood impurities that strengthens and invigorates vitality. Hence will be understood *how the Bath refreshes even better than food* after any excessive exertion that has unduly taxed vital force, and produced great bodily fatigue and weariness. "*After excessive fatigue, mentally* or *bodily,*" says Mr. Moore, "I have *invariably found* the most soothing and refreshing effect from its use."—*The Anglo-Turkish Bath,* p. 53.

"After long and severe fatigue," says Mr. Urquhart, "that fatigue such as we never know—successive days and nights on horseback—the Bath affords the most astonishing relief. Having performed long journeys on horseback, even to the extent of ninety-four hours, without taking rest, I know by experience its effects in the extremest cases. A Tartar, having an hour to rest, prefers a bath to sleep. He enters as if drugged with opium, and leaves it his senses cleared, and his strength restored as much as if he had slept for several hours."—*Reprint from "Pillars of Hercules,"* p. 43.

"Never was there a greater mistake made than to consider the Bath weakening," says Dr. Le Gay Brereton. "If you go into the Bath weary and jaded, even though you have been up and working all night, you come out refreshed; if from grief and care you are desponding when you enter, your heart is lightened before you leave, for it is impossible to resist the exhilarating effects of oxygen: if, on the other hand, from the reaction of over-excitement, you are restless and unable to sleep, the Bath becomes a narcotic. It is only the experienced physician who knows how many forms of disease originate in these so common, but now so easily obviated causes."—*Action and Uses of the Turkish Bath,* p. 6.

Mr. Urquhart in the reprint we have quoted says of the common porters of Constantinople—"You will see a Hummal (porter), a man living only on rice, go out of one of those baths, where he has been pouring with that perspiration which *we think must prostrate and weaken,* and take up his load of five hundred weight, placing it unaided on his back." Von Tempsky in his *Travels* says that the habitual use of the bath had exercised similar invigorating influences over the Catarina Indians, endowing them with great strength and powers of endurance:—

> "The Catarina Indians are described as the most famous throughout Guatemala for *carrying the heaviest burdens on their backs over the worst roads, for the longest distances, and in the shortest time;* their products are all carried thus to the market of Guatemala.
>
> "They generally go in bands of thirty or forty, Indian file, dog's trot, with the chief at their head, and each with his long staff, their support and their commonest weapon.

"Each with nearly two hundred pounds weight on his back, supported by straps round the forehead, shoulders, and waist, bending forward, they go thirty miles a-day *without fatigue,* and in good time; and *no rider has any chance with them in the steep parts of the road.*"—*Ante,* p. 151.

It is thus a peculiar attribute of the Bath that it is equally applicable in health and disease—beneficial alike to all constitutions, and so far from the judicious use of the Bath having any tendency to weaken the constitution, or exercise a depressing influence in disease, it possesses a cleansing and replenishing, a strengthening and invigorating influence, *incomparably superior to any medical agent that has yet been discovered.* How could the Bath possibly weaken and depress the vital organism, when experience has demonstrated that, in depressing and weakening disease, it acts as a powerful and safe stimulant—a stimulant beyond comparison—superior in safety and salutary effects to any the whole range of pharmacy can supply? Its influence is rarely, if ever, that of a depressing relaxant, but invariably that of an invigorating tonic in all cases to which it is properly applicable. This is the conclusion arrived at by the most eminent medical authorities of the day who have studied and tested its action, and *he cannot be a competently qualified practitioner who is content to remain in ignorance of so invaluable an agent,* that possesses such undoubted and powerful Prophylactic and Therapuetic properties.

## CHAPTER XVIII.

*In Abnormal conditions of the Heart, or predispositions thereto, the influence of the Bath most salutary—Opinions of scientific and practical authorities thereon—The action of the Bath in affections of the Head, Throat, Chest, and Lungs, or in predispositions thereto—Authorities quoted.*

Besides the objections already noticed that have been unreasonably urged against the use of the Hot-air Bath, there are others which we are aware intimidate many from availing themselves of its sanitary and sanative virtues. Unfortunately, when medical practitioners are consulted, there is, as yet, only an enlightened minority really competent to remove groundless apprehensions and advise with confidence the employment of a remedial agency so powerful and salutary; while even among those who are convinced of its general utility as a therapeutic, there are some who still entertain lingering doubts, respecting its safe applicability in some forms of disease, or predispositions to disease It is experience alone that can effectually remove such doubts, and the conscientious anxieties to which they naturally give rise. Already a large amount of decisive information has been acquired by experience, and it is gratifying to know that as the investigations of enlightened members of the profession have become more extended, their experience more enlarged and matured, so have apprehensions of danger vanished, and their confidence in the beneficent action of the Bath has been increased and confirmed.

*In all heart affections, or predispositions thereunto,* it was at first generally supposed that the use of the Bath would be attended with great danger. There are still many who, in all human probability, would receive great benefit from its soothing influence even in actual disease, yet are deterred from making the trial through vague fears that injurious consequences might possibly follow. Dr. Edgar Sheppard, who has studied the subject closely, says—"The alarm of those who have *actually organic disease of the heart*, or, at all events, an hereditary tendency thereto, is natural, and such as to excite our sympathy. There is an unmistakable dread of the hot-air Bath under these circumstances, arising from a fear of undue stimulation of the circulatory system. But it is remarkable that *the very contrary effect is produced in these unfortunate cases—the bath tranquilises and subdues.*"—*Bathing*, &c., p. 21. Erasmus Wilson, says—"I am not to be told that because the remedy stimulates the heart, it is not to be used. Every remedy that produces perspiration stimulates the heart, and it is one of the *virtues* of the hot-air bath that it *does* stimulate the heart. Nor am I prepared to admit that in cases of disease of the heart, the thermæ would be inapplicable. I believe just the contrary—that *many diseases of the heart may be cured* by the judicious use of the thermæ, and in the *very worst cases* it would prove to be the best remedy that could be employed."—*British Medical Journal*, October 13, 1860.

An increased activity in the circulatory power does not necessarily imply an increased virulence of whatever form of disease the heart may be affected with. The belief that it does, was, and to a large extent still is, the prevailing doctrine in medical schools, which it must be confessed are, for the most part, but gloomy abodes of superannuated dogma, into which the rays of experimental truth very slowly penetrates. In the *Manual of the Bath*, edited by Sir John Fife, M.D., "whose practical experience of the bath," says Dr. Sheppard, "has probably been greater than that of any other man in England"—it is stated that, "in the Bath, persons suffering from disease of the heart obtain instant relief, although the number of the pulsations is increased. It is just as in the case of a steam-engine going down an inclined plane, the piston works more rapidly because the work is done for it. The skin comes to the aid of the heart and lungs."

Dr. Goolden, who, as we have observed, made the bath a special study before reporting in favour of its establishment in connection with St. Thomas's Hospital, London, was quite astonished at its *soothing action on the heart.* "What struck me," he says, "as most remarkable, was the influence of the hot room in quieting the circulation in some cases of *palpitation* of the heart." Dr. Barter in one of his lectures in the Rotundo, Dublin, explains this—"When the pores, veins, and arteries were obstructed, was not the heart, upon those obstructions being removed, allowed to act more gently? Was it not an old proverb in the profession that the skin was the safety-valve to the heart?" See *The New Irish Bath*, &c., p. 50. Dr. Balbirnie remarks that "in purely nervous irritations of the heart, or in those connected with organic disease—in simple palpitations, in *angina pectoris*—the hot room actually does quiet the circulation."—*The Sweating Cure*, p. 35.

The house surgeon of the Newcastle-on-Tyne Infirmary, in which the Bath has been employed with the happiest effects for the last eight years, says:—"As far as I have observed, the extreme heat exerts less influence on the heart and circulation than the *ordinary warm* bath; and in order to bear out this assertion, I may state that some cases, in which the pulse and stethoscope gave *unmistakable evidence of heart disease*, such patients have undergone the process without attendant mischief, and with *most unlooked-for benefit.*"

Dr. Thudichum, who is a very high authority, relates the following:—"A case of dropsy from heart disease, with a pulse of 170, *almost moribund*, has come under my notice. The patient was kept in the Bath one day and one night, afterwards at intervals; within a week his pulse had become slow, averaging 75, and the patient was able *to walk about the garden.* Two cases of palpitation of the heart, unaccompanied by valvular disease, have come under my observation, in which a low temperature of the bath *mitigated* the palpitation, but a higher one *removed it;* so that, while rapidity of motion remained, the inconvenience and mental uneasiness were removed. The weight seemed to be taken off. With this experience I am glad to find, the records of the Newcastle Infirmary fully agree." —*Paper read before Medical Society of London.*

Thus it will be easily understood, as Dr. Sheppard observes, "how beneficial must be the action of the hot-air Bath in those dropsical effusions which are the result of diseased heart or kidneys. In every case of this kind the excretory power of the skin is reduced to a minimum, and carbonic acid and urea accumulate in the blood. That which most powerfully eliminates and derives, and restores the equipoise between solids and fluids, is obviously the most needed remedy. *There is no instrument* known to modern science which can compare with the bath for effecting these results."—*Bathing,* &c., p. 24.

Next to the fears so erroneously entertained about the injurious action of the Bath on the heart, it is by no means uncommon to hear similar fears expressed in reference to its influence on constitutions predisposed to *determination of blood to the head, and to throat, chest, or lung diseases.* In all these cases, however, enlightened medical experience has not verified professional or popular prejudices, but quite the contrary.

Among the ordinary run of healthy bathers, no apprehensions whatever need be entertained, should the Bath, in the first few instances of taking it, produce a hot flushed face, or a sensation of faintness. When it does so the reason generally is, that the skin is not in a healthy condition, and will not respond readily and actively to the heat of the bath or that the temperature is is too high to begin with, or that the stomach is deranged. Dr. Goolden, in his Report, already referred to, very truly remarks in the case of patients:—

"It requires some care in giving the bath for the first time, because the skin does not always respond to the heat by perspiration, and the patient experiences a sensation of faintness. The faintness is, however, more apparent than real, for the pulse keeps up, and the distress subsides as the skin begins to act. Whenever this distress is felt, the patient should have some cold or warm water thrown over the skin, or even be allowed to go for a minute or two into the cold air. *They never take cold.*"

Erasmus Wilson relates how surprised he was on discovering why he felt his face almost scalding, while his body was sensible to no inconvenience. He went in a temperature of 190 degrees, when "to the face and hands the temperature was for a moment almost scalding, but my body was sensible of no inconvenience. Had I been asked, before I made this experiment, what part of the body would have suffered most from the extreme heat, I would have said, the skin of the trunk of the body, because this is naturally the most sensitive from being covered and protected by clothing; but I was unprepared to find the real fact in the very reverse of this—to learn that the skin of the trunk of the body had lost its power of sensibility; in other words, had become partially paralysed from disuse of its proper functions."

The moment the skin commences to act freely all unpleasant sensations vanish, therefore, "the beginner or the owner of a susceptible constitution, when he becomes aware of an increase of rapidity of the heart's pulsations, and this sensation is commonly associated with a feeling of oppression, something approaching to faintness," instead of frightening his mind by conjuring up imaginary evils about his heart or head, let him follow Dr. Goolden's advice, and retire for a few minutes, or use cold or tepid water, as directed by the bath attendant.

Dr. Rayner's experience is, that "the idea too commonly prevailing that the thermæ is liable to produce disagreeable effects upon the head, is altogether erroneous, and I can honestly endorse Mr. Erasmus Wilson's statement, that *the brain never works more pleasantly than in the thermæ.* . . . . That the symptoms of oppression complained of are not essential but accidental concomitants of the Bath, my own experience has convinced me, and that they are nearly always preventible and known from the fact, that in my own bath, where proper precautions are observed, the alleged disagreeable results are seldom or never witnessed. Considering the indiscriminate manner in which *invalids* use the bath, without medical advice, the only wonder is that they do not occur more frequently."—*A Voice from the Thermæ*, p. 30.

The experience of Dr. Sheppard, which, as Superintendent of the Colney Hatch Lunatic Asylum, has been very extensive, thus deals with the objection about the Head:—"Stout, flesh-making persons (under which category come many of our city friends) are wont to say, 'I am afraid of a rush of blood to the head.' *There is no evidence to show that such a result is produced by hot air.* We have laid ourselves out to make inquiries upon this point, and we are persuaded that, beyond a sense of fulness on the first occasion of bathing, and on resorting to too high a temperature, there is nothing to establish the correctness of this objection. . . Since the opening of the Turkish Bath at the Colney Hatch Asylum we have subjected upwards of forty patients, all of them with head symptoms (*i.e.*, insane), to its beneficent operations, and *we have not met with a single instance* in which cerebral disturbance has been increased,"—*Bathing*, &c., p. 18.

With respect to the delicate internal surfaces of the throat, chest, and lungs, on which it has been alleged the Bath acts injuriously, we have already said something when noticing Sir Dominic Corrigan's ill-considered objections to the construction and atmosphere of the Bath. But we may as well add some authorities now, to show how, in the most serious diseases by which those delicate surfaces are so liable to be affected, there is no remedy known to medical science equal to the skilful employment of the Bath.

Dr. Balbirnie says—"In acute affections of the throat and tonsils, even in croup and diphtheria, the bath *almost invariably saves life.* In consumption, the bath, fairly tested, will, on the clearest abstract grounds, as well as on the *showing of facts*, produce the greatest ratio of arrests of the disease."—*The Sweating Cure*, p. 36.

"Bronchitis was relieved at once in many cases," says Dr. Goolden, "but it required several baths to cure those cases which were of long standing. Common catarrh is cured at once; and the *weekly use of the bath* diminishes, or altogether suspends liability to the attacks. Common catarrh includes what are called colds in the head, quinsey, sore throats before suppuration the common winter coughs, and some forms of diarrhœa." —*Report*, &c.

"If *consumption* is to be cured," says Erasmus Wilson, "the thermæ is the remedy from which I would anticipate the *best chance of success*." It is the opinion of Dr. Sheppard that "whatever doubts may exist as to the power of the Bath to cure consumption in an advanced stage, or even to arrest its progress, there is good reason to suppose that much benefit may be derived from its judicious application in the earlier phases of the disease, and in all subjects gifted with *the terrible inheritance of phthisical proclivity*."— *Bathing*, &c., p. 23.

Dr. Toulmin states in a paper read before the Harveian Society, London, that in the pathology and treatment of tubercular consumption the *functions of the skin are of primary consideration*, as, by eliminating poisons through its pores, we restore its respiratory action, and so enable it to assist the lungs in their important functions. Mr. Moore remarks that "if in the early stages of phthisis the skin can be employed in any degree to relieve the lungs, it must be highly important that it should be put in the best possible condition to fulfil its requirements, and be stimulated to the healthy exercise of its functions. To effect this the Anglo-Turkish Bath is certainly the *most powerful* if not the *only means*."—*Anglo-Turkish Bath*, p. 44.

But while the bath is the most potent sudorific known, it is very remarkable that it also possesses extraordinary power in *checking diseased perspirations*, such as occur in the latter stages of consumption. Dr. Leared declares "the direct action of the bath has been more strongly shown in removing night-sweats than in any other symptom. In several other cases I have recommended the hot-air bath for this distressing symptom. A patient who had been drenched by night perspiration told me recently, that after having taken a bath which I advised for him, he had no return of them, and several days had then elapsed."—*Papers on the Bath in Lancet.*

The evidence we have thus adduced respecting the influence of the Bath on diseases, or predispositions to disease affecting the heart, head, lungs, &c.—and we could easily fill dozens of pages with additional testimony equally decisive and authoritative—may, we trust, have some effect in enlightening the public mind and dissipating the perplexing fears with which its action on those organs has been so generally but most erroneously regarded.

## CHAPTER XIX.

*The objections of a Queen's College Professor of Medicine—Their ridiculous futility—A reason for "the cold and passive indifference" of Dublin practitioners to the Bath—Two cases illustrative of Drug and Hydropathic practice—Medicated and Mineral Baths.*

HAVING now noticed every objection that has been urged against the Bath, whether originating in professional or popular prejudice, it is for the reader to weigh their worth in comparison with the evidence of those who may be reasonably considered competent to give faithworthy testimony from their scientific eminence and personal acquaintance with the subject. But, although all the objections that have occurred to us have been noticed, many of the objectors have not been referred to, because, in every instance we have met with, new objectors as they spring up, parrot or paraphrase old objections. For instance, at the close of last year, we find a Professor of Medicine in the Queen's College, Cork, entertaining a society of young men in that city, while professing to lecture on "public health," with sneering allusions to "the lazy process of sitting in a Bath," and insinuating that "the Bath is advocated as a means of removing summarily the accumulated results of good living"—as a substitute for healthy out-door exercise, and as "a cure for all diseases." There is nothing in this but a silly repetition of what was alleged years ago; and it is sufficient to observe that no authority on the Bath ever advocated its use on the grounds alleged. The men, indeed, who have eulogised the almost boundless therapeutic properties of the Bath in the most enthusiastic terms, are those who still hold high position among medical practitioners, and who believing the Bath to be, in the words of Erasmus Wilson, " to the individual man, comprising his liver, kidneys, and skin, that which the sun is to the world and its inhabitants;" and who, like Dr. Madden, believe "there are very few diseases that might not be benefited by its use," still continue to retain their position as practitioners in accordance with Physic systems! No acknowledged Hydropathic teacher has ever eulogised the Bath as heartily and as superlatively as they have done; but owing to the professional martyrdom that awaits an open renunciation of an established pernicious system of Physic-practice, they have hesitated to compromise their position by standing forth the avowed followers of Hydropathic principles.

But this Queen's College professor has supplied rare proof of his capacity to pronounce an opinion on the Bath, by confessing that *after* he had delivered his opinion, he *then* proceeded to make himself up on the subject! He was taken to task for what he had so thoughtlessly said; and, in a second lecture, he stultified himself still further by the admission—"*Since* the subject has been forced on my attention, I endeavoured to ascertain the position it (the Bath) held in medical science. In none of the class-books, intended for the education of the rising generation *of Physicians*, do I find any mention of it, nor has it been introduced into any of the metropolitan Hospitals,"* &c. This is good news, at all events, for the rising generation of patients; but the *non sequitur* is surely even too gross for a Queen's College Professor of Medicine, that because he did not find the Bath recognised in the class-books of medicine (written, probably, before the Bath was known in this country), nor introduced into the metropolitan hospitals, *ergo* the thing cannot be good! A Professor who admits he first pronounced an opinion sneeringly concerning the greatest therapeutic agent we possess, and when the correctness of his judgment is questioned, *then* endeavours to ascertain what position that agent holds in medical science, certainly demonstrates the worth of any opinion he may be pleased to entertain on the subject, and how admirably qualified he is to instruct the rising generation of Physicians to practise medicine with safety and advantage to the public.

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* Cork *Daily Herald*, January 2, 1868. In the same journal appeared letters from Drs. Barter and Griffith, fully exposing the Professor's ignorance, not only respecting the Bath, but on the subject of scientific medicine also.

Common-sense people, in their simplicity, might imagine it to be a paramount duty of a Professor, whose office is to instruct the rising generation even of Physicians, to keep himself perfectly familiar with all that is going on in the scientific medical world. But this is the very thing so often complained of in these pages, that truth is shut out from the minds of the rising generation of practitioners by Professors who—if they do not "sit lazily in a bath," yet repose most ingloriously in their collegiate chairs and sinecures—who do not discharge the duties of their responsible offices with an independent intelligence, an active zeal, and a sensitive conscientiousness. We take it for granted, that Hydropathic principles and practice form no portion of this Professor's teaching on medicine; and might he not have reflected that the very same influences which have been operative on his mind in making him exclude the Bath from his system of medical therapeutics, may have been equally operative in excluding it from class-books and metropolitan hospitals—influences arising from the inveteracy of Physic bigotries, the unconquerable obstinacy of professional prejudices, the selfish pride of preconceived opinion, the dogged hostility of "subtle seniors" to improving changes, and the proverbial enmity of medical men to any innovating truth that would take them out of the sanctified paths of established routine, let alone truths that strike at the roots of profitable error.

It is notorious that metropolitan hospitals are under the dominion of medical cliques who have their own purposes to serve; and, unfortunately, those purposes are seldom consistent with the progress of science, or conducive to the public interests. What that eminent and good man, Surgeon Carmichael, said of "the baneful system" pursued by the "subtle seniors of the profession" in his day (page 29), is equally true now; and it is grossly absurd to suppose that any of those seniors will now voluntarily recognise a therapeutic agent like the Bath, which is so completely revolutionary as regards their whole system of theoretical medication. Just as the "old Physicians," in Harvey's time, believed that in *their* system of medicine there was nothing to be attained, so do their successors now believe respecting the system they live by; and they must be left, as Dr. Pettigrew said of the former, "to die out in the full enjoyment of their ignorance." As a matter of fact, however, the Professor is wrong in alleging that the Bath has not been introduced into any of the metropolitan (Dublin) hospitals. It has been introduced into at least one—the Adelaide Hospital—and reported most favourably on; while in England it has been in operation (among others) at the Newcastle-on-Tyne Infirmary since 1859, under the direction of Sir John Fife, M.D., who says:—"From what I have witnessed of its effects in health for training, in convalescence for enabling the valetudinarian to commence exercise, in disease as a remedy or a palliation, I am not afraid to stake my professional character by declaring my belief in its efficacy."—*Manual of the Turkish Bath*, Introduction.

But the calibre of the mind that rules the chair of medicine in Cork College, its desire to acquire knowledge, and its competency to afford sound practical instruction to the rising generation of practitioners, may be fairly estimated from the fact, that in the Cork Lunatic Asylum, in the County Infirmary, and in some of the workhouse hospitals of the county, the Bath has been used for years as a therapeutic agent, so that the Professor had ample opportunity to obtain the fullest possible information concerning its remedial virtues, had he desired to obtain it. Not, indeed, from class-books on Medicine would any one of common sense expect to learn about such a great "boon to humanity" as the Bath--books that a high authority, the *Medical Mirror*, reprobates as, for the most part, exhibiting a "chaotic confusion" of contradictory jargon—every edition of the very same work being inconsistent with the practice recommended in the pre ceding one, as any person can verify for himself, who will take the trouble of comparing the first and last editions of any work on the "Principles and Practice of Medicine" which ranks as a standard authority, such, for instance, as Sir Thomas Watson's.

An apology, however, has been made for "the cold and passive indifference" of Dublin practitioners to the Bath by Dr. Butler, who has opened a *Maison de Sainte* in that city, and is endeavouring to combine what is most excellent in Hydropathic with what is most destructive in Physic practice. In the *Medical Press and Circular*, April 15, 1868, he reports two cases, commencing thus:—

> "*My chief object* in reporting the two following cases is to bring under the notice of the profession the great value, particularly in chronic forms of disease, of a judicious course of medicated or Turkish baths in conjunction with proper constitutional treatment. In London, Paris, and many of the Continental and Eastern cities, Turkish and medicated bathing is properly regarded as a remedial agent of great power, while its easy application and the comfort it affords the bather, render it a favourite remedy with both physician and patient. In Dublin, perhaps, more than any other city in the world, is *the use of baths, in any form regarded with a cold and passive indifference*, which certainly *cannot be due to their want of real merit as curative agents*, nor yet to *any deficiency of appreciative intelligence* (if I may use the expression) *on the part of the Dublin practitioners*, a fact which their universal reputation proclaims (!) And yet, *that such is in reality the case*, I have upon the authority of one of the most venerable, and at the same time, illustrious practitioners in Dublin or any other city."

Assuming, then, that "the most venerable and illustrious practitioner" is correct in his opinion, and that "the cold and passive indifference of Dublin practitioners" to the Bath is not due to any want of real merit on the part of the Bath as a curative agent, but really does result from a "deficiency of appreciative intelligence" on their part. Observe how their apologist seeks to excuse this deficiency:—

> "I regard the present apathy of the profession on the subject not to any hostility upon their part to the use of baths grounded upon physiological or scientific data, but to the fact, that *up to the present, the subject has never been brought under their observation*, nor, I presume, are the majority aware that there is *an* establishment in Dublin *at present* second to none

in the United Kingdom, and where every facility is afforded for fully testing the value of the different descriptions of baths."

This excuse for Dublin practitioners, that "up to the present" —that is, until the opening of the *Maison de Sainte*, with Dr. N. J. Butler as Physician—the subject of Baths had not been brought under their observation is, of course, quite consistent with the establishment of extensive medicated and other Baths by the late Sir Arthur Clarke, M.D., nearly half a century ago, to which, in 1860, was added a Turkish Bath, and that the establishment then appealed to the Dublin practitioners, bringing under their observation "the improved Turkish or Hot-air Bath; the Vaporarium, or Russian Vapour Chamber; the Aromaticum, or Medicated Vapour Bath; the Metallicum, or Chalybeate, Iodine, Mercurial, and Antimonial Baths;" besides a number of others. And it is also consistent with the fact, that, in 1861, the splendid Turkish Baths in Lincoln Place were opened under the superintendence of Dr. Barter, and have been in full operation ever since. If, then, the Dublin practitioners are as "cold and passively indifferent" to the unintentional satire of their apologist, as they have been deficient in "appreciative intelligence" respecting the Bath, then, indeed, their "apathy" must be hoplessly stolid and incorrigible.

But as regards the cases reported, the first is one of chronic rheumatism of *nine years'* standing:—

"He was sent to me for the purpose of taking a course of Turkish baths, by *an eminent provincial practitioner, who had previously treated him with all the reputed specifics for the disease.* When he submitted himself for examination before entering the bath, the following were the most prominent symptoms he presented—his face was thin and drawn, of an ashy hue, and cadaverous expression. The tongue was slightly swollen, covered with a thick creamy fur, and deeply fissured. The stomach was distended with gas, and the parieties of the abdomen boggy; action of the heart extremely feeble but normal; pulse at wrist almost imperceptible. He complained of great lassitude, loss of appetite, constant headache, and stiffness of the back of the neck, extending upwards to the base of the skull, while the pains in his loins, hip, and knee-joints rendered locomotion an exceedingly difficult and painful operation. *After the second bath, he felt much improved in his general condition.* The stiffness in his neck

> vanished, he complained less of headache, and his appetite improved. Encouraged by so good a beginning, he persevered, and *after a short course of only eight baths, he was quite convalescent*, being able to attend to his ordinary avocations with a restored appetite, and an increase of muscular strength, and an immunity from pain, which enabled him from not being able to hobble more than a few perches at a time, *to walk a distance of six miles without the slightest feeling of fatigue.* He continued in the enjoyment of good health up to a couple of months ago, when he was exposed to a whole day's rain, got his clothes thoroughly saturated, and, as a natural consequence, an attack of acute rheumatism, from which he has not yet completely recovered."

This case has nothing worthy of reporting about it for Hydropathic practitioners, as it is their daily avocation to treat such cases, viz.—simple disease, easily subduable in the first instance, made chronic by drugging, and then, after years of protracted suffering, readily yielding to the powerful agency of the Bath, which, in this instance, appears to have been solely relied on, without any drugging at all. Not so, however, in the second case, which is described as "an excellent example of *psoriasis inveterata*—that is an inveterate form of scaly eruptive skin disease, known as "European leprosy:"—

> "Every part of his body, except the scalp, was the seat of the disease, but it had selected the lower extremities as the particular field for its depredations—from the knee of each leg to the sole of the foot was one mass of diseased cuticle. In many places fissures of great depth and extent existed, and communicated an aspect at once repulsive and alarming to the limbs. Upon the right leg also two small, but deep, and unhealthy looking ulcers had formed, and these I found most difficult to heal. I commenced treatment by ordering him a Turkish Bath, which cleanses the skin and rids it of all extraneous or effete matter more effectually than any other agent with which I am acquainted, and *by so doing prepares it for the application of more specific remedies* (!). I then ordered him to take *sulphuret of potash bath* every day for a fortnight, and at the same time I prescribed four drops of the *liq. arsenicalis* three times daily after food. Before the expiration of the fortnight, during which *he had a bath every day*, he was very much improved in every respect."

Here we have "an excellent example" of what patients have to expect, who confide themselves to enlightened scientific practitioners, who, like Dr. Butler, seek to combine Hydropathic agents with their poisonous "pharmaceutical filth"—attempting to undo with their drugs what Nature is endeavouring to effect through the simple agency of the Bath. The poison of the arsenic and potash was, to some extent, neutralised and speedily eliminated from the system by *taking the Bath daily*; but this was attended with a more or less exhaustive effect on the system, and necessarily retarded recovery. But, of course, medical Physiology, Therapeutics, and logic, all combine in ascribing recovery to the potash, arsenic, and nitrate of silver, which was "passed pretty freely over the surface," to further irritate the diseased cuticle and vesicles! The patient, however, got nearly well in spite of the poisons poured into him; went away; and in three months returned, when the disease "had assumed some of its former virulence."

> "I at once adopted the same treatment that had before proved so successful, with the exception, that *I alternated the sulphuret of potash with iodine and sulphur vapour-baths.* The happiest results followed the adoption of this plan, and he is now again making rapid and certain strides towards convalescence. I should have mentioned that before he *consulted me*, he had been about *nine months ill*, and had been *pronounced incurable* by *more than one practitioner*."

Enlightened practitioners! and what a sensible patient! These cases, however, show what the Bath is capable of doing, even when ignorantly and unskilfully employed by Drug Doctors who defile its simplicity and purity, and thwart its salubrious and curative action by administering their noxious compounds. We need only repeat what we said before, that it is open to patients to select one system of treatment or the other, according as their intelligence may dictate; but if they have sense enough to adopt the Hydropathic, let them take ordinary precautions to ensure its proper administration, and not ally it with poisonous drug practice to counteract its beneficial effects. As for the manner in which these cases are reported, they have certainly enabled us to comprehend more clearly than we did what Sir John Forbes intended to convey when he said—"The scribblers of the profession are a true plague: they fill the journals with cases, the truth of which is often questionable, and when not questionable, are so imperfectly narrated as to be useless. The object aimed at by them is a short and valueless notoriety."—*British and Foreign Medical Review*, vol. xxi. p., 445.

As for the sulphur-vapour bath employed in this case, it was, if not positively injurious, at least utterly worthless, as regards the sulphur. The medical profession have long laboured under the grossest delusions on the subject of "medicated baths." They have favoured them, because they thought it was within their power to impregnate at will the body with the poisons composing the baths, whereas, in some instances, the poisons used *never enter the body* at all; and in every case where benefit is derived from such a form of bath, it is from the *Heat*, and not from the *Medication*.

Dr. Robert M'Donnell, Surgeon to Stevens' Hospital, tells his students that the calomel-vapour bath is a deception, for that calomel is *not* absorbed by the skin. He says:—

"When I was a student I frequently ordered, under the direction of the late Dr. Hutton, calomel ointment for the treatment of psoriasis and lepra, not syphilitic. Those who were acquainted with the practice of this eminent surgeon, will remember that he frequently prescribed an ointment consisting of one drachm of calomel to an ounce of lard, to be freely rubbed over the surface of the body in such cases. I was struck by the fact that this mercurial preparation, so active when given internally, *never mercurialized when rubbed over the skin in the form of ointment.* I have known pounds of it to be used—rubbed in in ounces daily over the entire body—but I never knew a case to be salivated by it. Later, when turning my attention more to the subject which at present occupies us, I found that *mercurialization did not follow even the very frequent use of the calomel vapour-bath*—provided the patient did not let his head into the vapour and inhale the sublimated calomel. *When a patient leaves the calomel vapour-bath, if we scrape the surface and examine what has been there deposited in the microscope, we find the sublimated calomel in crystals*—a form ill adapted for cutaneous absorption.

"In fact, so convinced am I that under ordinary circumstances the cutaneous absorption of calomel does not take place, that although I have no love for it, yet, so far as regards fear of mercurialisation, I should not mind spending a month up to my neck in a sack of calomel. How is it then that *the calomel bath has been found to do so much good?*

"It is, gentlemen, *simply the vapour-bath acting beneficially on a malady which tends to get well of itself.*"—*Medical Press and Circular*, March 25, 1868.

And the same is equally true of all *Mineral baths:* any good derived from them is due solely to the heat of the water, and not to any poisonous substance with which they may be impregnated.

It is not to be expected that objections to the Bath will be suddenly overcome, or, that when ashamed to give open expression to them, the "subtle seniors" of the profession will be less active in carrying on their opposition in private to the great detriment of patients who consider they can safely repose confidence in the rectitude and soundness of such advisers. The progress of the Bath will be in proportion to the intelligence of the public, and every year is accumulating a mass of authoritative evidence in its favour.

As it is, any practitioner who ill advisedly disparages the Bath without having deigned to study its properties and test its merits, only exposes his own incapacity—his own palpable unfitness to be entrusted with the care of what is so valuable to mankind as the possession of sound health. The ablest practitioners who have studied the Bath, bear unequivocal testimony in its favonr. It is only among the self-sufficient and the self-contented, the indolent and the presumptuously ignorant, that its general merits are questioned or denied.

Dr. Samuel Jeafferson, in his address, as President of the British Medical Association, at the annual meeting of that body in 1865, gave his experience of the Bath as far as it had extended:—"My own experience," he said, "is as yet too limited to warrant my speaking *largely* on the subject of the Turkish Bath, but it is fair to state that the *doubts and anxieties with which I first regarded it have greatly subsided, and it continues to gain my confidence.*"

We are not aware of any medical gentleman having candidly investigated the merits of the Bath, so as to be enabled to base his judgment on *experience*, who did not, like Dr. Jeafferson, find his doubts and anxieties subside, and his confidence in its efficacy, as a therapeutic agent, continue to increase in proportion as his experience became more enlarged and matured.

There are, however, some respectable practitioners who willingly allow that the Bath does possess great merits in its applicability to some particular forms of disease, but whose minds are imbued with *speculative* apprehensions respecting its safety in certain cases. An indefinite and undefinable dread is felt, that dangerous consequences might possibly result from its use, and while such a feeling exists it is only natural to expect that it should be shared, to a large extent, by the public All such apprehensions, however, arise from the want of *sufficient experience.* It was experience alone that, for example, inspired a rational practical confidence in the use of chloroform, and in like manner, it is only experience that can make practitioners and patients acquainted with the value and safety of the Bath. Experience will teach that objections have been urged against its use, which are altogether of a visionary character, and have arisen from a careful investigation of its properties and uses not having been practically instituted. One ill-informed person conveys to another equally ill-informed his imaginary apprehensions, which are thus retailed in society until they come to be regarded as established facts. In this way error is propagated, and doubts and anxieties created, which can only be removed by the diffusion of sound knowledge derived from the calm investigations and successful results of experience.

## CHAPTER XX.

*Hydropathy in Disease—Illustrative cases—Dr. James Wilson, Dr. Griffith, Dr. Bennett, etc., etc.—Medical men the most appreciative Hydropathic patients—The Bath in Croup, contrasted with Drug-practice—The Bath in all Infantile Disease, and as a means of saving young life—The Bath a domestic necessity.*

Dr. James Wilson was the first English physician who, attracted by the fame of Priessnitz, visited Gräfenburg, and subsequently introduced and established Hydropathy in England. He says in the preface to his most instructive work on the *Water Cure*—

"I had long suffered from ill-health; for after an unusually long professional education at home and on the continent, devoting myself to it as my great pleasure, as well as my business, I entered at once, without sufficient rest, on a rather large private practice, and, at the end of ten years, had become diseased myself.

"This pathological condition consisted in *chronic inflammation of the duodenum, a congested liver, nervous dyspepsia, and psoriasis, with frequent attacks of neuralgia*—an inveterate complication which scientific medical men know to be all but *incurable*, and *quite so by any exclusive medicinal measures.*

"Finding no permanent relief from the best medical advice, combined with *nearly three years* continental travel, when I was first told of the bold and comprehensive treatment, which a man without any professional education had ventured to make upon the human body, mainly by the application of pure water, my informants seemed to consider that they were less citing *a great discovery in remedial art*, than a new instance of the audacity of empirics and the credulity of mankind. I had reason to think differently, and had often contemplated the possibility of a rational system of hydro-therapeutics.

"Soon after my matriculation at Trinity College, Dublin, in 1825, having already studied some years at a large hospital, I heard from the lips of one of the greatest Professors of the day, the following remarkable words:—'*If men knew how to use water, so as to elicit all the remedial results* *which it is capable of producing, it would be worth all other remedies put together.*' Knowing sufficiently the grounds upon which Dr. Macartney made this assertion, and coming from one who was then my Magnus Apollo, it made a more indelible impression, perhaps, than it did on any other of his hearers; and now, after the lapse of many years, I heard of a non-professional man attempting to solve the problem indicated in the dictum of one of our most profound physiologists and best teachers. I did not hesitate to proceed at once to investigate those pretensions, and put them to the proof in my own person, for a period exceeding a year."

Now, what was the result of the experiment? Why, "at the end of *three months' treatment*," says Dr. Wilson, "*I could walk twenty miles, and eat hard cow beef with any man!*" And after remaining more than a year at Gräfenburg, undergoing the system and studying it, he returned, he says, "*in as perfect health as I had ever enjoyed.*" But when he spoke of introducing the system into England, he says, "*few medical men would even listen to me*, or discuss the *rationale* of the system; and, with *one* exception, all my friends in the profession sought to dissuade me from the undertaking." Happily, however, he was not dissuaded, and he has lived to see scientific Hydropathy established with a success that was not to be dreamed of when he commenced his enlightened labours.

Dr. Wilson mentions a fact which is worthy of consideration by the public at large. He says, "my best patients have often been *retired medical men*—acute, learned, and experienced—men mature in judgment and in years—men sufficiently clear-sighted to see *the errors and inefficiency of the old system of the drug-treatment* of chronic disease, and too *independent* and too *honest* not to hail an ally of the healing art, come in what guise, under what name, from what quarter it might." Is this not significant? It consists with the experience of every gentleman who has had extensive Hydropathic experience; and ought not the knowledge of such a fact make the public reflect on the merits of the two systems?

After the Bath had been established by Dr. Barter in Ireland, among the first who took it up in England was a retired medical gentleman, Dr. George Witt; and it was in his private Bath in

London, erected 1858, that Erasmus Wilson says, "I first took rank as a bather," and obtained that knowledge which led him to declare its establishment "a boon to humanity." In like manner the most zealous and the ablest advocates of the Bath, as of Hydropathy generally, have been medical gentlemen who, as a sort of forlorn hope, after protected suffering, and the utter failure of all drug treatment to afford relief, were induced to make trial of its curative properties. In this way, Dr. Griffith relates, in one of his able and useful publications on the Bath, that he first became acquainted with its merits. He says:—

> "He sought the benefit of the Bath, after being reduced to an emaciated and enfeebled state by a course of drug-treatment prescribed by an eminent Dublin Physician, and never can feel sufficiently grateful for the benefits received from it." He says, "his experience of the various remedies for rheumatism and rheumatic gout has been no slight one, comprising as it does, the trial on several occasions, of almost every drug-remedy in the Pharmacopœia, usually prescribed for those diseases; from colchicum, hydriodide of potassium, bark and ammonia, down to Dover's powder, lemon juice, and iron; but *until he made use of the Bath, the delight and enjoyment of perfect health had been for years unknown to him.*"

Dr. E. Haughton, who has written with much ability on the Bath, and has had a large experience as a Hydropathic physician, said in 1867:—

> "He was sixteen years ago a patient in that establishment (St. Anne's), long before Dr Barter had thought of the Turkish Bath; and during that time he directed his attention to hydropathy and to the value of temperature. *Any measure of health which he now enjoyed, he attributed to the treatment he received from Dr Barter.* Of course he had consulted medical doctors and physicians of the town where he lived, and he had the best advice gratuitously, being a medical student; nevertheless *they did not succeed in doing him any good, but hydropathy did.*"

Dr. Wollaston, who served in the Medical Staff of the Army during the Russian war, says:—

> "In my professional attendance on the sick, I contracted a severe attack of fever, which nearly proved fatal. After having partially recovered, by the skill and zeal of my medical friends, Dr Delmege and Dr Calder, of the 47th Regiment—whose names I cannot forbear mentioning—I was induced to try a Turkish Bath, *notwithstanding my debility.* I laboured under severe hepatic disease and jaundice, followed by œdema of the legs

and abdominal dropsy. I confess that the first Bath was somewhat difficult to bear, owing to the exhaustion which attended my illness. Afterwards I greatly enjoyed the Bath, and *each successive one made me feel fresher and fresher, till they materially altered the whole character of my illness.* The copious perspiration gave me immense relief. My skin, which had been hot, dry, parched-up, and irritable, now became cool, soft, and pleasant; the cuticle peeled off the whole body like the desquamation from scarlet fever: I had the pleasure of renewing the whole surface of the body, as if I had been moulting. The new cuticle was as smooth as velvet, and the organ of touch extremely sensitive, but not at all painful. The biliary secretions gradually returned, the absorbent system, heightened into action, removed the dropsy from the abdomen and extremities, and the general functions improved: I slept better, and my appetite became keen. *I will venture to assert most distinctly that I experienced more benefit from a continuance of the Bath on alternate days than I derived from all other medicines put together, and that I owe my life to the Turkish Bath.*"

This is the usual story the medical supporters and advocates of the Bath have to relate, and a large volume might be filled with similar experience and testimony; but we will only give the latest case that has come under our notice. It is that of Dr. Bennett, who has had charge of the Dispensary District of Bruff, in the County of Limerick, Ireland, for more than a quarter of a century. He wrote, "*I owe my life to the Bath,* which I look upon as the greatest adjunct to Medical Science that ever was discovered." Like others, he was prejudiced against the Bath, for it ran counter to all his professional training and practice; yet, as a forlorn hope, he had recourse to it in 1867, and now lives in the enjoyment of good health. In a letter to Dr. Barter, he says:—

"You pronounced what I now know to be a most perfectly correct and most accurate diagnosis of the disease from which I had been suffering for the last ten months, the last two of which were to me the most trying, with unmitigated never-ceasing pain day or night—the result of recedent gout; and although I did all in my power to obtain relief, having consulted the heads of my profession both in Cork and Dublin—men of learning and scientific attainments, who I knew felt a lively interest in my recovery and welfare, yet it was all to no purpose.

"At the request of many friends, and as a *dernier resort*, I consented—although prejudiced against it—to consult you, having been informed by some medical friends that, from the debilitated state under which I laboured

—being reduced in weight *seven stone* in ten months—*as sure as I got into a Turkish Bath I might not expect to come out alive.*

"To my surprise at my first interview, you explained to me how the Hot-air Bath, so far from weakening the system or increasing the debility, which no doubt was very great in my case, gave strength, vigor, and health to the constitution, and that I might not take *one* but *two* in the day."

Dr. Bennett then relates how he had to be assisted into his first Bath, but after taking only two, his strength returned so wonderfully that he "was able to walk without any assistance at all, and passed a most comfortable night, free from pain, for the first time during the last two months of his illness." And, he adds, "after an extensive practice of nearly forty years, I ought to be able to form a rational opinion. and come to a fair and just conclusion as to the utility of the Bath." That opinion, to his credit, Dr. Bennett has conveyed to the public in able lectures on the Bath, and he has adopted it in his own practice with most successful results. One case of a very fatal disease, which he succeeded in immediately arresting, is deserving of notice, as it admirably illustrates the material difference between Physic and Hydropathic practice, and it was the first in which he applied the principle of the Bath.

*Croup* is a disease that makes sad havoc among children. It has baffled the art and skill of the Faculty for ages. Napoleon, in the hope of staying its ravages among the young generation, appointed a Medical Commission in 1807 to investigate its nature, and devise, if possible, some mode of treatment that might be efficacious in arresting the progress of a malady that almost decimated the population; and yet it is a disease susceptible of simple and easy cure by rational means. It is an inflammation of the throat which extends through all the branches of the bronchial tubes; a membraneous substance is formed in the throat, which, with muscular contraction, renders breathing difficult, ulceration takes place, the inflammation extends to the membrane of the lungs, the cellular substance of the lungs becomes distended with poisonous accumulations, and if the patient does not die of suffocation, his fate is consummated by blood poisoning.

Now, the combined wisdom of all the Medical Faculties in Europe could only find out modes of treating this disease that necessarily tended to increase its mortality. Such Drugs as Calomel, Tartar Emetic, James' Powder, Castor Oil, Tartarised Antimony, Antimonial Solution, Ammonia, and Burnt Brandy, with Blood-letting by lancet and leeches, constituted the chief arrows in the quiver of physic with which to combat this disease. But there was another device—*bronchotomy*, or cutting a hole in the larynx for the patient to breathe through, which, says Surgeon Porter, "for a single *successful* case there are a thousand to the contrary! I have performed the operation myself on the child, and have seen it frequently done by others, and *in no one case has the life of the patient been saved.* I have known and heard of it often, but never understood that it produced a recovery."—*Observations on the Surgical Pathology of the Larynx, etc.*

Now, this formidable disease yields almost instaneously to the Bath, and *no child of ordinary vitality need ever die of it*—when deaths do occur, as we said of Fevers, in cases where the system, before the attack commenced, possessed recuperative vitality, those deaths, be assured, are to be accredited not to the disease, but to mal-treatment. When a proper Bath cannot be obtained promptly, the next best thing to do is to improvise one, for which purpose small cast metal bars are used. They are easily heated, and placed under a chair in which the patient is properly seated, as in Dr. Bennett's case. He writes:

"Bruff, Feb. 5, 1868.—You will be glad to learn that I had a great success last night in the use of Hot-air. A gentleman in my neighbourhood had his dearest child, a boy of 15 years, seized with croup at 5 o'clock yesterday morning, when Dr. —— was sent for, gave him tartar emetic solution, applied six leeches, and next a blister. The breathing becoming worse, with constant stridulous crouping, his mother sent for me. Before I arrived, Dr. —— told his father the boy could not survive more than a few hours.

"On my arrival, although he could neither drink nor speak, his pulse was perceptible. Fortunately I brought my iron bars with me, and had them made red-hot in the kitchen range. I got my patient placed on a cane-bottomed chair, covered round with blankets, and in twenty minutes had him in a profuse perspiration. I then had a blanket rung out in boiling water, had him dashed over with tepid water, and rubbed, then rolled him in the blanket, and placed him in bed, with a jar of hot water to his feet, where he continued sweating till six o'clock this morning, taking occasional drinks of cold water.

"Finding the heat and sweating becoming rather oppressive, I changed him from the blanket to a hot sheet, and, to my great delight, he was as red as a rose, his breathing became tranquil, and he was able to drink freely. Dr. —— openly and honestly declared he would become a convert to the Hydropathic treatment after such an unexpected event. The patient slept for three hours without the slightest difficulty in breathing, and I left rejoicing in a grand recovery, as all agreed. The father shed tears with joy, and the mother looked on me as a messenger from God to save her darling boy."—*Extract from letter to Dr. Barter.*

Now, the rationale of this treatment is very simple, indeed. There is no mystery about it, and it at once appeals to common sense. From the rapid extension of throat inflammation the function of Respiration was dangerously impaired. The patient could neither exhale the poisonous waste of the system, nor inhale a sufficient quantity of oxygen to purify the blood. Fatal consequences rapidly follow when such a state of things is permitted to continue. The lung circulation, as the great purifying process for the blood, was arrested; and, instead of being thrown out of the system, the poisonous waste was thrown back into the general circulation to disturb and derange every function of the whole economy, and, without relief, death was merely a question of a few hours.

But the relief afforded was immediate on the induction of perspiration, by which the blood was brought rapidly to the surface of the whole body, and its poison eliminated through the awakened energies of skin action. In such cases the skin, as "an assistant apparatus of the lungs," largely performs the function of the lungs. By this free circulation of the blood on the surface, its purification was not only promoted, but the congestion that was weakening the vital functions of the whole internal organism was relieved, simultaneously with which the inflammation, the congestion of the throat was acted on, the breathing improved, and nature aided to exercise with greater freedom and power her own curative energies. All this is excessively simple and natural, though it is not to be met with in college lectures, nor in Drug systems of practice.

But observe the common sense of the opposite course of treatment that does consist with college teaching, and does cumber ponderous volumes of practice. Tartar emetic is a nauseous poison, that has been administered for hundreds of years in the hope that, by producing a sickening revulsion, internal inflammation might be abated. But the sense of its administration is, that at the very time the blood is becoming rapidly poisoned a new poison is thrown in to accelerate the work of death!—not alone by adding new poison to the blood, but by imposing an additional tax on the vital energy of the patient to resist it! Then to further impair and weaken vital force, at the moment when it is most required, bleeding is resorted to—an expedient that deprives the patient of the very fluid which, as Carpenter says, is the *pabulum vitæ* for the whole system! And then to torture, tax, and exhaust still more the failing energies of the vital economy, blistering must be employed to destroy the very organism destined by Nature to assist the lungs in such an extremity, and through the unimpaired medium of which the whole internal organism can be readily reached and acted on, when proper means are employed. If, in fact, human ingenuity was anxious to devise a course of treatment that would accelerate the fatal termination of the disease, no better means could be resorted to than those we have described, and which, for generations, have received the approbation of the Faculty in the delusive hope of curing it!

Croup is a disease which is peculiar to the young, and a few words may be said here concerning all "Infantile diseases," as they are called, measles, Hooping-cough, convulsions, etc., etc. In all cases drugs of *any* kind, in *any* form, or in *any* quantity should never be given to children. It is little short of murder to do so, more especially when mercurial preparations are used, for no human knowledge or foresight can calculate on what mischief may follow. "Don't drug your children for your most friendly Apothecary," was the sound advice given by Sir Philip Crampton to a mother; and almost equally pernicious with drugging is the custom of bathing as generally followed, and of swathing in flannels. The shrewd sense of the late William Dargan—the greatest practical benefactor his country ever gave birth to—when asked on one occasion, what in his opinion would be the best way to improve the social condition of Ireland, tersely replied—"Educate the mothers," and volumes of sound practical wisdom lie in the sententious observation.

Not one mother in a thousand, no, nor in ten thousand, is practically fitted to rear and develope healthy children in consistency with the laws of Nature. What between their own ignorance of the laws of health, the habits and prejudices proverbial among the nurse class, and the prescriptions of the Doctor or Apothecary with their soothing syrups and alcoholic poisons, the wonder is not that one half the children born into the world are destroyed before completing their tenth year, but by what means two-thirds of the remaining half contrive to escape; and this more particularly applies to town populations, as well as to children in the middle and higher ranks of society. "While my old nurse was with me, the child's feet were always cold, because she insisted upon covering them up with socks; but now that I leave them exposed to the air, they are constantly warm," was the remark of an observant mother, and what is true of the feet, applies with even greater force to the functions of the skin of the whole body.

The custom usually followed in bathing or washing children is radically wrong, and when the constitution is delicate the process is generally destructive, for it debilitates and cherishes a tendency to cold and internal congestions which pass under the generic term *Convulsions*. Heat is an essential to the growth and healthful development of all young organizations, but the sensation of heat imparted by warm water has its reaction in cold, and is essentially different from the animal heat which nourishes and invigorates the body. It is from *within* and not from *without* that such heat must be generated, and the best means by which that generation can be effected is by the healthful circulation of the blood, which involves a healthful condition of skin organism, while in no way can the skin be maintained in such purity and tone as by the genial action of the Hot-air Bath. It does nothing more than keep the cutaneous surface in a wholesome state; and, this done, Nature works her own purposes with the internal economy.

"It is impossible to avoid the conclusion," observes Erasmus Wilson, "that the close clothing of the body from the moment of birth, and the continuance of the process throughout our lives, must tend to prevent the proper and healthy development of the skin, and also to debilitate it; and that the opposite course, of exposing the skin to the air, and *promoting its natural functions by means of the Bath*, must have the contrary effect of hardening and strengthening the skin, and rendering its functions more perfect." And, again, he says:—"In a word, the habit of clothing the body, of keeping it shut out from the air and from the light, weakens the nerves of the skin, and consequently the natural and healthy sensibility of the organ. The little boy *bred in the Bath* complains of no hurt when he is accidentally struck, or when he tumbles; and that which would be a punishment to another boy is none to him." The fondness that children accustomed to the Bath have for it, and the marvellous effect it produces on delicate, sickly infants, when judiciously administered, demonstrates how in accordance its action is with Nature's laws. It is an easy and certain means of strengthening the constitution of delicate children—it educates, trains the skin to withstand climatic changes, and thus prevents chills, colds, and an array of evil consequences—and, above all, it counteracts or eradicates, as nothing else can do, inherited proclivities to disease, which are the penalties of past transgressions of Nature's laws.

There are few houses now built for the occupation of the middle classes in which there is not some sort of provision made for bathing—some apartment that is not satirically designated "the Bath-room." But a trough for warm water, or a shower-bath, is a burlesque on bathing; and could the balance of good and evil produced by such bathing be truly ascertained, there can be no doubt that the latter would largely preponderate. Every house should possess a proper Hot-air Bath, which combines the advantages of being the most healthful, the most useful, and the most economical.

*Healthful*, because it purifies and invigorates the functional life of childhood, assists materially in the development of mechanical growth, and exercises a most beneficial influence over mental dispositions by its soothing action on the nervous system. It developes in the infant system an increased power to pass with safety and ease, if not with perfect impunity, through the ordeal of what are known as *Infantile diseases*, which the majority of people believe that children *must take*, but not one of which a child *should take* if Nature's laws were observed.

*Useful*, because in the Hot-air Bath there is also combined all that is beneficial in the warm water and shower baths, and that, too, in a way that when used their action cannot be otherwise than salubrious—the action of the hot-air on the skin precluding any danger from cold douching, but making it very enjoyable and healthful. "In the exclusive, combined, or alternate use of *stimulants* and *sedatives*," says Dr. James Wilson, "consists the whole 'art and mystery' of Physic;" and for young life, more especially, there is nothing in Nature to compare with the stimulating and sedative influence of *Temperature* judiciously employed.

*Economical*, because the cost of a hot-air bath, with all proper conveniences, need not exceed that of an ordinary bathroom, while, if *properly constructed*, it can be made available for many domestic uses. It will afford a constant and plentiful supply of hot water for household purposes; while, as a drying-room, the convenience it affords can only be appreciated by those who have had experience of it. The annual expenditure caused in the generality of families by doctors' fees and "pharmaceutical filth," with which children are soothed into the grave, would not only pay good interest on the cost of constructing and maintaining an excellent Bath, but leave a good balance; so that, as far as mere money is concerned—to say nothing of the wealth that lies in health—Nature in this, as in all instances, has economy on her side.

## CHAPTER XXI.

*The Bath falsely represented as a panacea—Its true merits—Curable and Incurable Disease—Drugging and Hydropathy contrasted—Illustrative cases—Skin Diseases.*

THE allegation that the Bath is advocated as a panacea for all diseases, we have more than once referred to as totally unfounded; but it is one that is sneeringly whispered about in society by Physic practitioners; and small minds fancy they are uttering something remarkably smart and clever, when they parrot the jeering remark—"Oh! you know the bath will cure everything!" It is the Drug-school alone that ostensibly profess to have a specific for every complaint: no Hydropathist of character would practise any such scandalous quackery. He knows too well that there are incurable diseases as well as curable—that, as we have explained, people are born into the world with different organisms, destined to endure, if nothing whatever interfered with them, for shorter or longer periods of time—born with organic defects, with transmitted disease, or predispositions thereto, and possessing a given amount of vitality from which many things may combine to *subtract*, but to which no human art or skill can *add*.

Hence there necessarily are incurable diseases which no human skill can combat, but to accelerate their fatal termination human presumption, ignorance, and quackery, can do, and does do much. Yet it is even in such diseases that the Bath is enabled, in conjunction with an enlightened Hygiene, to afford substantial assistance; and the reader, who has followed thus far, need not have repeated how the Bath accomplishes this by assisting Nature's operations in the healthful regulation of the functions of Nutrition. It was considering the Bath in this rational light that led the late Dr. Madden to regards its introduction among us as "*a very great blessing to humanity,*" and to say, *truthfully,* "*there are few diseases, in my opinion, that might not be benefited by its use.*" And it is true; for when no human knowledge, skill, or power can possibly cure disease, its alleviation *is* possible, nay, almost always *certain,* and life is susceptible of being prolonged by the alleviation of pain; while by no means can this be so effectively, so easily, and so agreeably accomplished as by the soothing and stimulating properties of the Bath, when judiciously employed.

But far more than three-fourths of all disease are in their inception referable to functional derangements, and over these the Bath does indubitably exercise a sovereign power when promptly and skilfully exercised. We have seen how the skin is the great medium through which the Bath acts on the internal organism; but the skin itself is subjected to many loathsome diseases, and it is to them more particularly we now direct attention.

Disorders of the cutaneous organism have their primary source either in (1) inherited scrofulous taint, or in predispositions; (2) in the impurities engendered by what is so falsely termed "*good* living;" (3) in a debilitated condition produced by deficient and unwholesome food; (4) in the disturbance of healthy functions resulting from other diseases aggravated by drugging; (5) in the imperfect action of the skin itself, by which its secretions become corrupted, engender parasites, etc.; and (6) in poisonous taints received externally. But it will be observed that all these sources culminate in action in one—defective or perverted Nutrition, synonymous with want of oxygen in the system.

For the various disorders thus affecting the skin, Nosologists, of course, have fabricated a formidable nomenclature with which Pharmacy has more than kept pace by concocting a tenfold number of specifics. But it is now almost universally admitted among medical men who have made skin diseases a *speciality,* that no reliance can be placed on the most famous drug specifics—indeed, no two specialists agree in the use of the multitude of so-called "remedies" for any one form of disease!

Take for instance a very common form of skin disease called *Prurigo,* of which Nosologists distinguish four varieties characterised by a thickened and discoloured state of the membrane, attended by excessive pruritis or itching. "No age, no no sex," says Professor A. T. Thompson, "is exempt from the attacks of Prurigo; it is observed to make its appearance in all seasons, and to find its victims in every rank of life." Again, he says, "in all its varieties, the itching is intolerable, augmenting in comparative severity according to the age of the patient.'

"The causes of the disease, whatever form it assumes," we are told, "are obscure." Now, it is one of the many follies of Physic practice to be always speculating about "forms" of this and that manifestation of diseased phenomena—to be searching after "exciting causes," which is nothing better than trying to grasp shadows. This folly, however, leaves ample scope for the play of the imagination, and, accordingly, as causes have been fancied, so have remedies been conjectured. But with what profitable result we may learn from Professor Thompson, who candidly says:—"It must be acknowledged that this troublesome affliction often resists *every treatment that has been suggested!*" This refers *exclusively*, however, to Physic treatment.

A free use, both internally and externally, of the most virulent poisons has been resorted to—one set of practitioners extolling arsenic, another mercury, some strychnia, others nux-vomica; while antimony, iodide of potassium, henbane, colocynth, nitrate of potash, and even bleeding to the extent of seventy ounces from the arm, have been respectively advocated. All these various remedies have been freely experimented with, all alike have failed, all contributed more or less to aggravate the disease they have proposed to cure, and all have served to swell its death-roll!

Surgeon J. L. Milton, of St. John's Hospital, London, in his papers *On the Treatment of Diseases of the Skin*, says of

Prurigo, that under the various modes of treatment that have been resorted to, " it seems to have *resisted every attempt to subdue its malignity*, and, perhaps, there were *more suicides* from Prurigo than from all other diseases of the skin put together." And he is candid enough to say—

> "I confess my entire ignorance as to how cod-liver oil and strychnia may act, and it may, perhaps, save some trouble if I say, once for all, that I am not prepared to offer any explanation of the action of medicines, for the simple reason that in respect to most of them *nothing whatever is known for certain*, and as to *cloudy conjectures* and *cabalistic forms of speech*, I leave them to those who like them. I am content to admire at a distance the person capable of solving such questions as causes and modes of action, as I quite despair of my own ability to do so."—*Medical Press and Circular, March* 11, 1868.

Yet, in the treatment of skin disease, Surgeon Milton has undoubtedly made a creditable step in the right direction—he has found in the Bath what he vainly looked for in Drugs, though it is with a timorous dubiety that he employs its powerful and salubrious agency, while he still has a lingering disposition to believe that some drug poison may yet be found to assist the action of the Bath! He says :—

> "But *the Turkish Bath is the thing*; it scarcely *ever fails to do good*, and is, perhaps, more peculiarly suited for prurigo than for any other disease of the skin. There are many persons in the habit of sponging all over daily, and who, therefore, have quite made up their minds that they require no other kind of purification. *They cannot too soon be undeceived as to the efficacy of water used in this way*; it will no more free the skin from soot, dust, dead scarf skin, and secretion, than rubbing a horse gently down with a soft towel will make his coat glossy. To rid the surface thoroughly of these impurities, two things are necessary: free perspiration must be induced, and the skin must be well rubbed and kneaded. Trainers are well aware of this, and when preparing a man for a fight, make him perspire freely, and then rub him down with a hard towel. The vigorous system of cleansing adopted in a Turkish bath is more like that used in training than any other, and will soon open the eyes of those who put their faith in cold sponging only, by bringing away an unexpected quantity of dirty skin. *As there is no danger to be apprehended from the use of the bath*, so long as the simple precaution is adopted of not staying in too long at first, and always taking the bath on an empty stomach, *it can scarcely be overdone*. I have known one taken three or four days together without any harm arising from it, and should not anticipate any."—*Ibid.*

Habitual bathers, and those who have taken the Bath daily for weeks and months together in chronic disease, will smile at Surgeon Milton's expression of confidence, that "one taken three or four days together" is not likely to be productive of any harm! A little more experience will satisfy him that as the Bath is a strengthening, invigorating process, its daily application in disease increases its curative power; and he will also learn that there is no form of skin disease in which it cannot be advantageously employed, while its regular use is prophylactic of them all. He obviously is not yet fully informed respecting the essential difference between a hot-water and a hot-air Bath, though he admits a preference for the latter—

> "When it can be used; but when the patient is very *nervous*, suffering, or supposed to suffer, from *disease of the heart*, or subject to *fainting*; where he resides at a long distance from any establishment or baths of this kind, or where expense is an object, the hot bath is our only alternative, and fortunately it is *a very good substitute.* The water should be at quite ninety-eight or a hundred degrees of Fahrenheit. The patient, so soon as he enters the bath, should scrub himself all over with the flesh brush, lather the affected parts with either the soft soap of the London Pharmacopœia or Pears's transparent soap, and then let himself down into the hot water, in which he ought not to remain more than three or four minutes. Having dried himself thoroughly, he should apply any ointment he may be using and dress directly."—*Ibid.*

Fears about heart disease we have already disposed of, and the Bath, properly administered, guards against nervous agitation, faintness, etc. But however much better a hot-water bath may be than none in skin diseases, it is out of all reason to consider it as "a very good substitute" for the Hot-air Bath. There is simply no "substitute" for it—nothing that can act as it acts, or that possesses its properties. What it can accomplish in disease, no other form of Bath, nor all the poisonous agencies in the boundless range of the *Materia Medica* can accomplish.

We have already noticed a case of *Psoriasis*, or European leprosy, which yielded to the Bath when not over skilfully employed (page 346), and Surgeon Milton confesses that with respect to its treatment by drugs, he "is sceptical with respect to the medicines themselves." He fortifies his scepticism by a high continental authority, of whom he says:—

> "Hebra breaks loose in one *overwhelming anathema* against the drugs recommended for lepra; root and leaf, bark and flower, acids and alkalies, sulphurets and muriates, old messes and new-fangled compounds, are all included under one common ban. The anthrocokali, which was to cure every disease of the skin, is just as powerless as the Chinese ethiop's mineral, or the stibium with which of old the Greek ladies painted their eyebrows. I wish some person in this part of the world would be as plain spoken. There are positively hundreds of remedies recommended for diseases of the skin, of which it is very doubtful whether one was ever subjected to such a test as it ought to have gone through before being admitted to the privilege of having a word said in its favour; yet once it gains a footing there is little chance of getting rid of it. Year by year the journals and societies help to swell the huge aggregate of mischief, and when an honest investigator like Hebra sets fairly to work to see what will do good and what will not, he has to waste years in useless or dangerous experiments before he can make *maison pette* of all this rubbish. Mr. Wilson has arranged alphabetically upwards of fifty remedies employed in this complaint, *every one of them useless or nearly so*."—*Ibid.*, *March* 25.

But while Hebra uses arsenic internally, he adopts means to neutralise its poison as much as possible. He has in fact taken a leaf out of the practice-book of Hydropathy, and thus applies the knowledge he has acquired:—

> "Hebra uses arsenic internally in all the usual modes of giving it, but he also places great reliance upon external means, the principle of which seems to be a method very like that employed by Priessnitz. *The patient is packed in a wet linen sheet, over which are laid a thick doubled blanket and a waterproof covering. He is allowed to drink water freely*, and is kept in this state of maceration for three or four hours. *The patient is then plunged into a cold bath, and if possible, a cold douche follows the bath, after which he goes out for a walk.* This process is repeated twice in the twenty-four hours. *A light diet is ordered and no spirits are allowed.* Hebra also uses the potass soap, which is rubbed on each patch of lepra till a slight bleeding comes on, the tar oils, and the solution of pentasulphide of calcium recommended by Vlemingkxt, which is rubbed on like the soap till excoriation is produced. *The patient after using any of those takes a bath.*"—*Ibid.*

That is after applying poisonous irritants to the diseased surface, he takes a Warm Water Bath to wash them off—to neutralise their injurious effects as much as possible! This is the way Hydropathic agents become scandalised in the hands of men who have not fortitude of mind or intelligence enough to abandon at once a pernicious reliance on drugs. It is, we know, an infirmity of educational training and professional practice that has engrained drug superstitions, and they are most difficult to eradicate—indeed, impossible to do so from the majority of minds. But surely when a practitioner has advanced so far as to have tested the potent curative powers of the Bath, and found no failure and deceit there, as Surgeon Milton has done, or when, like Hebra, he adopts other Hydropathic means, surely a little more study, reflection, and experience ought to make him discard drug fallacies altogether, and not mar salubrious treatment by counteracting or contaminating it with what is poisonous? In all cases of actual sores, simple water dressing is incomparably superior to all the poultices and filthy ointments that ever were devised.

There is only one other form of skin disease to which we need refer, as our object is not to particularise the various forms of disorder peculiar to the skin, but to indicate generally that in *all* forms Hydropathic treatment is the surest, the safest, and by far the most agreeable that can be employed. Surgeon Milton says:—

> "Prurigo often breaks out in persons who have nothing to reproach themselves with in regard to cleanliness. Mr. Startin, indeed says, 'that the neuralgic itching which some writers consider as a form or variety of prurigo is, perhaps, *more frequently met with in the respectable walks of life than any other cutaneous affection.*' Such persons often seem surprised at being told *to make free use of hot baths*, but they forget that they do not take *sufficient exercise to keep the skin in a healthy state*, and that means, which would do very well with men riding twenty miles a-day, or working hard at training, are quite inefficient when exercise is reduced to a gentle stroll. Elderly persons in good circumstances, and people who have retired from business, often seem to think it is hardly respectable to go beyond a steady walk, but prurigo will not yield to such gentle means, and *till regular active exercise has become a settled habit*, the action of the skin *must be encouraged.* In all cases I think no woollen ought to be worn next the skin."

Now, we have very fully described the perspiratory organism and functions of the skin in Chaps. VII. and VIII., with a view to illustrate the action of the Bath on the internal economy through its medium. But we now desire to draw attention more particularly to the absolute necessity of attending to skin cleanliness, as essential to personal purity and health. We do not mean mere surface washing with soap and water, cold or warm, by which the external surface may be made to wear the appearance of cleanliness, but the thorough flushing of the pores —the perfectly healthy action of the whole organism, by which alone internal and external purity can be preserved. We will explain.

Independently of the perspiratory apparatus of the skin, there is another apparatus physiologically known as the "*sebacious system*," which is composed of numerous follicles spread over the greater portion of the body, the function of which is to secrete a peculiar oily matter for the purpose of keeping the surface of the skin in a soft and healthy condition. "The apparatus for keeping the surface of the skin bedewed with an oily fluid," observes Erasmus Wilson, in his *Practical Treatise*, "resembles, in general particulars of structure and economy, that of the perspiratory system. It consists of minute tubes, which traverse the scarf and sensitive skin, and enter the substance of the corium, where they terminate in small glands."—Page 56.

According to the same authority, and there is none higher on the subject, it is the healthy action of the *sebacious system* which is peculiarly and injuriously affected by the "sedentary and irregular habits of refined society." Its functions are not properly performed; the secreting process is irregularly effected, and its organism torpid; the contents of the oil cells get solid and dense, and are either imperfectly or not at all exuded. In this state they are either thrown out on the surface of the skin in a mass, or, if too solid and dry, to be so ejected, they accumulate in the tube of the gland which they unnaturally distend, and cause an irritation which frequently is manifested by extensive inflammation.

In this foul state of the *sebacious system* the parasite first observed by a German physiologist, Dr. Simon, makes its appearance in the oil tubes, and multiplies rapidly. "The animalcule of the skin is found in the oil tubes whenever there exists any disposition to the unnatural accumulation of their contents; it is found in numbers, varying in one to twenty, in the interior of the little groved cylinder, which is squeezed out by the pressure of the fingers."—*Ibid,* p. 62. This parasite Mr. Wilson calls *entozoon folliculorum,* and it unites the characters of the higher annelida or worm-tribe, of the lower arachnida or spider-tribe, and of the lower crustacea or crab-tribe, to such a degree that the scientific zoologist is puzzled in which class to include it.

But it appears it abounds in all town populations. "As in the majority of mankind, and certainly in all the inhabitants of cities and large towns, the skin is more of less torpid in its functions, so the presence of this animal in the skin is *the rule,* its absence *the exception.* I have found it in all ages, from youth to old age, more numerously, it is true, in the latter than in the former period, and in great and remarkable numbers during sickness."—*Ibid,* p. 62.

Not only is it to be found in all ages, but also in all ranks of society; and the *British and Foreign Medical Review* observes:—

> "The delicate town bred lady of fashion, in descending from her carriage, shrinks instinctively from the mass of rags, filth, and vermin, which is brought in contiguity with her precious person by some pertinacious beggar; ignorant all the while that her sebacious follicles give board and lodging to a host of parasites, whose numbers may equal that of the various kinds of 'small deer' that nestle in the matted hair and tattered garments of the fellow being whom she regards with such loathing. Where ignorance is bliss 'tis folly to be wise, but we consider that such knowledge ought not to be withheld from deference to fastidious delicacy, for it supplies an immediate inducement to the adoption of such habits as may free the sebacious system of those unwelcome inhabitants."—Vol. xxi., p. 202.

Now, a sufficient quantity of habitual exercise in pure air will effect the desired purpose. But an occasional "constitutional walk" will not have the effect; and, failing such exercise as will cause free perspiration, relieve the torpidity of the skin, and restore its normal action, no amount of mere surface washing, nor any quantity of poisonous lotions can be of any avail. Even warm water bathing will not free the system from these disagreeable lodgers, and, in fact, failing proper healthy exercise, there is no means that can be commanded equal to the Bath. Hot Air, and not Hot Water, is the sole remedy, and this is one great reason why there should be Hot-air Baths in every town, and why every one who, lacking the necessary exercise, desires to preserve personal purity—thorough integrity of the skin organism internally and externally—without which there cannot be perfect health—should consider it a moral duty to habitually take the Bath.

# CHAPTER XXII.

*The effect of Drug treatment in Cholera—Its universal failure—The Hydropathic treatment—The disease popularly known as "The Black Death"—The Drug treatment of it on the Continent—The mal-practice of Irish Physicians despite of all experience—Effects of Temperature.*

Cholera is one of the many diseases which, in a marked degree, has baffled all the skill and resources of drug-practitioners. No medical man, pretending to character, will now presume to possess any control over this disease by his drugs. Physic is not one whit advanced in this respect, but is just now as ignorant and as powerless as in 1832; and yet how book shelves do groan under the weight of choleraic literature—an accumulation of pretentious volumes filled with wild theories and wilder remedies, conjectures and modes of treatment all in as endless a variety as the reflections in a kaleidoscope, yet all founded on drugging, and all pretending to cure by drugs! "*There is no known cure for Cholera,*" says Dr. Johnson, Professor of Materia Medica and Therapeutics in King's College, London, and, he adds, "*there probably never* will be." This probability may be taken for an absolute certainty as far as the Physic School is concerned, but not so as regards Hydropathic practice, as we will explain.

All the authentic information that has been obtained concerning Cholera, shows that it is a very simple form of disease, and that there is nothing *necessarily incurable about it.* In the "Report of the Cholera Epidemic of 1865, in the Maltese Islands," by Surgeons Adams and Welch, published by the Army Medical Department, there is a great deal of valuable information concerning the disease in all its forms, and the conclusions arrived at may be briefly stated—

First—Cholera is contagious, which some theorists have doubted. This is proved by the influence exerted by human intercourse in the diffusion of the disease throughout the Maltese Islands. This, indeed, is now the general opinion, and it is always the safest to act on.

Second—Three varieties of diarrhœa were observed during the epidemic, having very marked distinctive characteristics. One was the ordinary summer diarrhœa, which was more common than generally, among both the military and the civil population, but this was attributed to excess in eating fruit, which was cheap, as the rich would not purchase any, and to irregular and drunken habits among the soldiers. This form, however, was very tractable, and *did not appear to have any tendency to develop into cholera.* The second form exhibited every degree of intensity, and when severe was classed under choleraic diarrhœa," but, "although intractable, it *evinced no tendency to pass beyond a certain point*, or to assume a more malignant form." The third form was so completely intractable that in sixty-one cases, where every possible attempt was made to check it, *in none did it succeed*, but it was *invariably* followed by full development of cholera. The medical reporters say that this form "was clearly *an early stage of cholera*, and it may be fairly questioned whether *a single case* was prevented developing itself into cholera by treatment directed towards *the suppression of intestinal flux.*" And it is further positively declared that what is called generally "premonitory diarrhœa tending towards cholera, but easily checked," was not met with during the epidemic, but, on the contrary, the conclusion arrived at is, "that the diarrhœa which appeared to yield to treatment *would have stopped without it*, while that form of diarrhœa which tended to pass into cholera, continued its fatal course *in spite of every repressive means.*"

Third—When the treatment was repressive of Nature's efforts to obtain relief, when to that end all the appliances of practice were directed, can we be surprised that, as the report declares, *every mode of drug treatment failed.* "System after system failed," and the mortality was fearful, rising as high as 72 per cent.! But from their failure there is much to be learned—much that confirms the previous conclusions of scientific inquirers who are not prejudicially wedded to preconceived opinions and irrational theories.

Now, it is most important to note, that of all the various modes of drug medication employed, those were the most fatal which dozed the system freely with *drugs and stimulants*, and those most successful, that is, the least deadly, which left Nature to herself, or gently aided her efforts at self relief. Thus among the military, under drug-medication carried to such an extent that even a deadly poison, strychnia, was administered in one and a half grain doses!—the mortality was as high as 72 per cent., whereas among the civil population who were subjected to treatment "of the mildest character, leaving the patient very much to his chance," the mortality was only 62 per cent. A very high rate, certainly; but under the drug treatment in vogue among us, the mortality has ranged from 30 to 67 per cent. The civil practitioners in Malta employed drugs sparingly. "Emetics were occasionally used, and also mercury; *stimulants* never; castor-oil treatment by a few;" but even with this comparatively mild treatment the rate of mortality was fearful.

Now, the whole gist of this able report goes to establish the conclusion that Drug Medication is not only *utterly worthless* in Cholera, but that it is *positively destructive.* The whole Pharmacopœia has signally failed to provide a curative, and any of its various compounds, even in their mildest form, must be productive of harm, for they are all alike revolting to Nature. Such a system of treatment has only one result—to lessen the patients' chances of recovery, and thus by aggravating the disease its mortality is increased.

There is no reason now to doubt that, as Surgeons Adams and Welch report, "the symptoms of cholera are due to the presence of a material poison, and that the exit of the *materies* *morbi* is chiefly by the intestinal tract, commencing early in the disease, and extending apparently into convalescence." Surely, if this be the case, the conclusion suggested by the *British Medical Journal* appears to be irresistible, namely—"that the repressive action of opiates and astringents *must be injurious by impeding the exit of the poison.*" Surely if the poison be in the blood, and if Nature is endeavouring to relieve the system of its presence by expelling it through the intestinal tract, it requires no superhuman effort of intellectual power to arrive at the conclusion, that the sooner the poison is eliminated from the system the better it is likely to be for the patient. This, surely, is common sense, which does not, however, generally tally with a drug practitioner's sense.

This truth was proclaimed more than twenty years ago by Hydropathists, and Drug Doctors got hold of it, and perverted it into what they call the *eliminative* treatment of cholera—the eliminative agents being, of course, drugs! Thus Professor Johnson says:—"The adoption of an *eliminative* treatment of cholera—by means of emetics, mild purgatives, and *copious draughts of water*—would, I am persuaded, do much to lessen the mortality from this great scourge. The very general conviction as to the worse than uselessness of alcoholic stimulants in the collapse of cholera is more to be relied upon, inasmuch as it has been *forced upon men's minds in opposition to preconceived notions and prevailing theories.*"

But are alcoholic stimulants one whit worse than emetics and purgatives? We have seen how purgatives act—how all medicine acts—in being followed by effects more or less exhaustive of vital force; and thus, at the very time when the skilful scientific physician requires to employ all his resources to nourish and cherish the vital power of the patient, the *eliminative* druggist steps in with his emetics and purgatives to waste, depress, and exhaust that power! It is true there appears to be a difference in the destructive character of drug treatment. Dr. Bullen says *calomel* is just 37 per cent. less murderous than *opiates* and *stimulants!* "The treatment by *calomel*," he says, "was certainly better than by *opiates and stimulants*, for it produced only 30 per cent. of deaths, whereas the latter treatment was followed by 67 per cent., and why?" "Because," he says, "it left the cures more to nature. *Cold water* is one of the best remedies. The less stimulants, opium and other violent treatment, so much the milder will be the reaction and consequent fever."

In fact, anything that is *now* sensible and scientific in the medical treatment of cholera has been taken from hydropathic practice. The *eliminative* theory is essentially hydropathic, and has been successfully practised by a very few enlightened practitioners since the experience acquired in 1832. When the cholera made its appearance in 1849, Dr. Barter published a small tract explanatory of the hydropathic treatment he adopted, and found eminently successful, but it was idle to think of stemming the professional and popular prejudices that *then* prevailed in favour of poisonous drugs and equally poisonous alcoholic stimulants. But he had the satisfaction of seeing that as a knowledge of the practice he recommended was diffused, so was it appreciated:—

> "Tell Barter that his system has lately become the universal practice in the Southern States of America for cholera, *and since its adoption, although it is of course but imperfectly carried out, the mortality is not one-fourth.*
>
> "I never saw cholera of so frightful a character; that in Quebec, which you recollect was so near doing for me, was nothing to it; the violence of the spasms was such, that blood oozed through all the pores of the skin, especially with the niggers. It did not give the slightest warning; the men often fell at work, and before four hours were dead."—*Extract from a letter from Lieutenant-Colonel Cummins, C.M., dated New Orleans, February* 20, 1849.

But Dr. Barter had not then a knowledge of the Hot-air Bath, which in the first stage of cholera is the best possible *eliminative* that can be employed. In the "blue stage," however, he deprecates the use of the Bath, because as he observes:—"Evaporation from a moist surface is the means employed by nature to enable the human body to maintain the normal temperature of 98, irrespective of the degree of heat to which it may be subjected; but in the case of a cholera patient in the blue stage of the disease, the vital function of the skin having all but ceased, that organ loses the power of secreting the amount of moisture necessary to enable it to bear with impunity the action of a temperature higher than its normal state, and, consequently, exposure to it causes the elevation of the temperature of the body to a point higher than that compatible with its well-being; and such were the results in every instance in which I witnessed the application of heat in the collapsed stage in 1832, even in those cases which were beginning to recover before recourse was had to it."—*On the Prevention and Treatment of Cholera*, p. 21.

Cholera is one of those intensely malignant diseases—its poison makes such rapid and destructive inroads on the vital functions, that when the constitution of the patient has been enfeebled from any cause, the only chance of safety is by prompt and effectual elimination of the *materies morbi* from the system. It is in such critical cases that the contrast between Drug action and Bath action is most marked. The swallowing of Drugs may, undoubtedly, be followed by the ejection of the *materies morbi;* but what then, the patient expires in the effort —sinks from exhaustion. True, the Cholera may be said in Physic phraseology to be cured, but the patient is killed, and of course it was the Cholera that killed him, for it would never do to impute anything of the kind to the Physician or the Physic. But the truth, nevertheless, is very plain and simple, the patient had not sufficient vital force—which is only another mode of expressing what is popularly implied by "constitutional vigor" or "stamina"—to fight successfully against the power of two poisons combined. He might, if let alone, have had Nature strong enough in him to free his system from the poison, the presence of which gave rise to the symptoms called Cholera; but when the poison of the Physic was added, Nature was overtaxed, and death resulted.

Essentially different is Bath action from this. It eliminates the *materies morbi* even more rapidly than any medicine could possibly do, admitting that medicine has such an effect; but while the Bath eliminates the poison, it, at the same time, adds strength to the functions of life—assists Nature with new material and new power, as nothing else can do, to combat the disease, eject its virus, and repair its ravages. And we cannot too often impress on the reader that this is the great difference between the two systems of treatment in all disease—the Bath gives health and strength—drugs, weakness and disease.

*The Black Death*, popularly so called, that appeared in Ireland during 1867, was another disease that exhibited in a very humiliating light all the vaunted learning and experience of Physicians, and laughed to scorn all the resources of their art, with that of Pharmacy combined. As usual, the first contest among them was about the *name* to be conferred on the disease. Some said it was only a more malignant form of "typhus," with which Ireland has always been favoured. Others, while they did not question its "typhoid character," considered it should be more properly distinguished as "purpuric," and then there were others who would have it to be "cerebro-spinal fever," and so the war of words went on. But as the disease would not stay its ravages until the Doctors had settled their learned squabbling about its name, there was nothing in it but to apply all the remedies that were ever thought of, as applicable to all the names that were suggested, in the hope that some one of them might prove an Abernethy club, and knock it on the head.

Three years previous to the appearance of the Black Death in Ireland, it had been endemic in North Germany, and the Prussian Government having directed its Medical department to investigate the disease, Dr. Simon, the head of that department, reported, under date April 19th, 1865, that:—

> "So far as results have yet been codified, medicine seems *universally to have been powerless against the disease*, and perhaps in some cases to have *lessened the patient's chance of recovery.* The officer who has just reported to the Prussian Government on the epidemic prevailing about Dantzig,

> adverts (like many preceding writers) to the sudden collapse which often *baffles all remedies*. And evidently a disease which tends to that issue will not admit that *generally depressing treatment* be used against it, except (if at all) with the very utmost circumspection. It is on record that one French practitioner, who tried bleeding for the disease, *lost thirty* of his first *thirty-one* cases, while a second, using similar treatment, *lost twenty-one* out of *twenty two*; and though other practitioners have alleged that in their hands this treatment has been of good effect, certainly it could not be admissible except under very close and careful qualifications with regard to the circumstances of its employment. Mercury has been *freely tried*, and seems to have been *at least useless*. Opium has been strongly recommended by some French practitioners, and *perhaps*, under some circumstances, has been of advantage,"

This statement represents the conclusions arrived at respecting drug treatment by all scientific inquirers—German, French, American, and English. All unite in admitting the powerlessness of medicine to stay the fatal progress of the disease, and all suggest the probability that medicine lessens the patient's chances of recovery. Under such circumstances it might have been supposed that, when the disease made its appearance in Ireland, the first care of medical men would have been to avoid a mode of treatment which had been found so therapeutically worthless and destructive elsewhere. But Drug practitioners are not easily diverted from their courses, and the utter worthlessness of their *medicamenta* had to undergo further demonstration at the expense of human life. We quote from one of the medical organs as follows:—

> "We have carefully reviewed all the reports of treatment recently published in our columns, and have been struck by the fact that the therapeutical methods adopted have been scarcely *less numerous, widely divergent, discordant, and fruitless than those which have been resorted to in the treatment of cholera.* Here is an epitome of what has recently been tried by way of treatment of cerebro-spinal fever in Dublin—*mercury*, carried in some cases to the extent of salivation, *emetics, cathartics, opium, belladonna, digitalis, squills, prussic acid, chloroform, ether, Dover's powder, James's powder, chlorate of potash, carbonate of soda* with lemon juice, *valerian, iodide of potassium*, and *cinchona bark, ammonia, wine*, and *brandy*—all internally; *enemeta of turpentine*, &c., were also freely administered: and besides these internal remedies, *cupping, leeching, blisters, sinapisms, turpentine stupes*, heat and friction to the limbs, and *tartrate of antimony*

to the shaven scalp, were often prescribed."—*Medical Press and Circular*, July 10th 1867.

Here is a formidable array of Drug poisons, sufficient, one would imagine, to knock the vitality out of any honest disease. They might as well have belaboured it at once with the whole Pharmacopœia! No wonder the *Medical Press* observes, that "thoughtful men, on viewing such a formidable list as this, are not unlikely to echo the words of Dr. Simon—'*Perhaps in some cases medicine has lessened the patient's chances of recovery.*'" It is certainly astonishing with what presumptuous temerity some practitioners, reckless of consequences, throw deadly poisons into the human stomach, without a rational hope of benefit therefrom, or a rational idea of what their action is to be, but with the certainty, nevertheless, that they are poisons, and that their natural effect is to put an additional tax on vital power, and thereby facilitate the approaches of death. The same reckless and useless drugging has been resorted to in the treatment of this "black death," "purpuric," or "cerebro-spinal fever," or whatever other name it may be designated by, as is still wantonly followed in the case of Asiatic cholera in defiance of all experience. As the same authority observes:—

> "It is now generally admitted by the leading members of the profession, that *medicines avail nothing to recover patients from choleraic collapse.* But although this conviction was arrived at by numerous observers in 1832, and was *decisively established* by the returns obtained by the Treatment Committee of the Medical Council appointed by the General Board of Health, of the treatment pursued in cases of collapse during the epidemic of 1854, the *distressing practice of administering drugs during collapse is still, to a large extent, persisted in*, so that *thousands* of cholera patients, while deriving *no aid* from them, not unfrequently *suffer from their effects*, especially if the struggle for life is prolonged into the stage of 'reaction.' Now, we appeal to the common sense of the Profession, and ask whether, in reference to cerebro-spinal fever, *a like melancholy and discreditable history is to be enacted?* Have we not data enough to enable us to settle once and for ever, whether or not medicines can exercise a remedial power in the treatment of this disease! If we have, surely the question presses urgently for an answer; and it behoves us not less surely, if that answer should be negative, at once to acquiesce in, and act upon it by ceasing to *trouble the sufferers*

*with drugs*, which, though *certain to do no good*, are anything but certain of *doing no harm*."

But drug-bigotry, with which the general run of practitioners are so deeply imbrued, is not easily made amenable to science or common sense. The extent to which it is carried, despite all reason and experience, is truly marvellous. The most poisonous drugs are those that are more generally valued and employed as a last resource. To recover a patient from true choleraic collapse is an effort the *vis medicatrix naturæ* but rarely succeeds in accomplishing, even when not thwarted by drugging, or when aided by rational means. But to restore a patient dosed in that stage with strychnine, or other deadly poisons, as the unfortunate British soldiers selected at Malta to be inhumanly experimented on were dosed, is a wicked mockery of nature, or, at best, asking nature to counteract not the fatal tendencies of the disease alone, but also the destructive effects of a murderous practice. The conclusion the *Medical Press* arrives at, from a review of the whole evidence as to the value of Drug medication in cerebro-spinal fever exactly accords with that previously concurred in by scientific physicians as to its deleterious influences in the treatment of cholera, and is thus stated:—

> "After carefully considering the abundant evidence bearing on this point, and now readily accessible, we do not hesitate to affirm that according to our judgment this evidence amounts to *irresistible proof*, that in the treatment of cerebro-spinal fever, *drugs are useless*, and that the chances of life of sufferers from the disease are, *cœteris paribus*, greatest in those cases in which *none are given*."

What, then, is to be done? Is the disease to be left to run its course? Better so, indeed, than to interfere ignorantly and irrationally by drugging. But it has been observed that he is a physician "poorly equipped, who cannot soothe the nervous system without poisoning it," and in this disease, as in cholera, there are rational and simple means by which its fatal tendencies may be averted. Dr. Burdon-Sanderson, in his report "Of the results of an inquiry into the epidemics of Cerebro-Spinal Meningitis, prevailing about the Lower Vistula," in the beginning of 1865, advocates the application of ice to the spinal cord. Dr. Simon, in his report already referred to, says:—

> "In various processes of disease which resemble meningitis in their nature, the local application of cold judiciously and skilfully made, has given to modern medicine *some very notable successes*; and to it, more than to any known resource of the art, I should myself have been disposed to look hopefully in the present instance. . And Dr. Thudichum (who has seen something of meningitis on the continent, and who has favoured me with a memorandum on the recent epidemics in Bromberg, Ottmachan,) tells me that present experience in Germany is in favour of this principle of treatment."

Notwithstanding that the weight of evidence and experience is decidedly against the use of Drugs, and in favour of the ice treatment, yet in Ireland, in all cases, save one, Drugs were persistently and fatally employed:—

> "We confess to some surprise (says the *Medical Press*) in observing that, as far as we are aware, these authoritative recommendations have, with one exception, been *wholly ignored* or *disregarded* in the treatment of cerebro-spinal fever in Ireland. *In no instance*, we believe, has ice been applied to the back of the neck, and in only one case (treated by Dr. Lyons) does there appear evidence that it has been applied to the head."

Unfortunately there is no mystery about the ice treatment. Ice is only congealed water, and it is beneath the dignity of pretentious practitioners to employ a simple thing that any child could understand. Were ice only a drug poison, extracted by pharmaceutical ingenuity from some animal, vegetable, or mineral substance, then, indeed, it might stand a fair chance of being employed. But modern medicos, for the most part, have an abhorrence of nature and of simples. They delight in administering nauseous compounds, and drug, drug, drug on with a pertinacity that would be commendable were it not so deadly.

But this ice treatment, which Medical authorities admit has been followed by successful results such as no drugging could obtain, is only a very partial and imperfect application of the great Hydropathic agency—*Temperature*, the proper employment of which, in the treatment of disease, forms no part of medical education, and, indeed, is not even recognised as within the sacred sphere of "legitimate medicine!" Thus, from ignorance of Hydropathic principles, and of the best mode of securing their skilful realisation in practice, the ice bag in the hands of Physic-doctors is little better than the chance-medley that is an attribute of all quackery. It is used as a sort of Abernethy club, and, because it is so simple an agent, it is rashly and foolishly concluded that no great harm can be done, should it strike Nature on the head instead of the disease.

Cholera and the Black Death have been selected for the purpose of illustrating, more forcibly, the essential worthlessness of all the resources of Drug practice in the presence of serious disease, for the more serious the disease the more worthless does that practice appear. Were there any truth in Drug theories, exactly the reverse ought to be the case, and powerful drugs should exhibit their powerful curative effects just in proportion to the malignancy of the disease to be overcome. But the contrary is the invariable effect, and the more virulent the disease, and the more powerfully "heroic" the remedies employed, the more certain is death. How, indeed, could it be otherwise, for surely as Dr. Wendell Holmes observes, "the presumption always is, that every noxious agent, including medicines proper, which hurts a well man hurts a sick one." It only shows how wonderfully perverted the medical mind can become by educational training and professional habit—how insensible to the teachings of science and of experience, when a superstitious faith in Drug-poisons, based on a contrary presumption, still continues to be the recognised guide in medical practice.

## CHAPTER XXIII.

*Insanity—First introduction of the Bath in a Lunatic Asylum —Its highly Salutary effects—Experience of Superintendents of Asylums in Ireland and England—The Culpable apathy of those entrusted with the treatment of the Insane.*

"INSANITY," says Bingham, in his treatise on mental disease, "is an affliction as singular as it is terrible—a perfect Proteus, whose mysterious nature and infinite diversity of forms have made it from time immemorial the wonder of the multitude, the sport of the unfeeling, the gain of empyrics, and the *opprobrium of medical science.* Pitiable, indeed, has been the lot of insane persons through centuries of neglect and mismanagement. But a brighter day has risen. Diseases of the mind are become a subject of general interest. They have been carefully investigated by numbers of highly educated professional men in this and other countries, and found to be in their early stages *as tractable as others,* and in their more advanced state *not hopeless.*"—*Observations on the Religious Delusions of Insane Persons,* p. 7.

Hydropathic applications in various forms had long been practised in the treatment of lunacy, but on the establishment of the Hot-air Bath by Dr. Barter, the attention of Dr. Power, Resident Medical Superintendent of the Cork District Lunatic Asylum, was happily directed to it, and he became convinced that it could be employed with beneficial effects. Having, as he tells us, reflected deeply on the subject, for a considerable period, he concluded to recommend the Board of Governors to introduce the Bath, which, "after much discussion and opposition," they finally consented to do. At their solicitation Dr. Barter under-took to superintend its erection, and in February, 1861, it was opened for the reception of patients.

The first Bath was administered to seventeen patients under the personal direction of Dr. Barter, who in one of his published lectures thus refers to the circumstance:—

"At the first bath I gave at the lunatic asylum in Cork there were seventeen lunatics. When they were in and seated on the bench they then came to tell me all their diseases. In a short time they began to perspire, and it is a remarkable fact that you can recognise a lunatic by the peculiar smell from his person, and, except in cases of organic disease, it is *that* impurity going to the brain that makes him mad. It is the diseased condition of the blood acting on the brain, something in the way that whisky does, which causes those morbid ideas in which lunacy consists to emanate from the individual, and accordingly it will be found that no remedy exists for cases of lunacy at all comparable to the bath, owing to its purifying action on the blood. I asked the seventeen what brought them to the asylum. Their answer was very significant. Two-thirds of the number said it was whisky and porter, and the remaining third told me it was mercury.

"I then came to one man, and questioned him. He told me nothing about himself, but he said, 'I think this bath is good for every body.' I noticed that he was very intent on rubbing down his arm, and he was smelling it, and licking it too. Standing up again, he cried, 'I say this bath is good for every body.' Another one of them said, 'I say it is not.' I asked him why he said it was not good for every body. He said, 'I am a tailor, and if we were here always we would not want any clothes.' I asked the other man why he said it was good for every body. Now, attend to the answer, for it is worth a thousand lectures of mine. He said, 'When I was working in the fields my sweat rolled down from me like water. It had no nasty smell, nor disagreeable taste. Now sir,' said he, 'my perspiration is thick and nasty, like oil. It has a bad smell, and a worse taste. When the cook puts a pot on the fire, with a piece of meat or vegetable to boil, doesn't the fire throw the impurities to the top, and doesn't she take a spoon and skim them off?' I asked him, 'How long have you been here?' He said, 'Nine years.' I then further learned that he was what was called a taciturn lunatic, and that for six years previously he had not interchanged a single word with his fellow-men. His case was considered incurable, but after the fourth bath he was discharged as cured. He has remained out of the asylum since, a comfort to society, and to his fellow-men.

"I told the matter to Lord Carlisle, then Lord Lieutenant, and he directed the erection of a bath in Limerick, and directed his secretary to see about the erection of one at the Dundrum Criminal Lunatic Asylum. I now speak it here publicly—though the reporters are present—that it is a public disgrace that those in authority, knowing as they do the benefits that have been conferred by the bath on the poor people in these institutions, do not extend the same blessings to other establishments in the country. Lunacy is a reproach to society, and lunatics of all others deserve everything we can do for them. God forbid that a man should be allowed to remain in the position—the terrible position I have described—for nine years. What must be the feeling of gratitude of that man and his family, when they found, that by means of the bath—by means of the simple enjoyment of this luxury—he was sent home rejoicing to earn his bread, and was enabled to thank me, as he did on his knees, for the great benefit conferred on him. Really when I get on this subject I can not restrain myself, when I consider the nights of anxious care and the days of toil, and the money and time I expended in bringing the bath to its present condition, and in endeavoring to have the institution brought home to and subservient to the poor."

Since then Dr. Power's extensive experience has convinced him, that the Bath is "*a safe and powerful agent in the treatment of the insane,*" and it really is a cruel shame that such an *economical agent* is not at work in every asylum in the country. The logic of facts is irresistible, and Dr. Power's testimony thus deals with facts:—

> "The first persons submitted to its influence were much pleased with it, and *were anxious to go again.* Once in the week was the time at first appointed for its use, which was gradually made more frequent, and after about four months' use of it, I found *seventeen* persons had been *perfectly cured* by it, and sent home to their friends. The cases to which I allude were a long time in the house, and classified with *the incurables.*
>
> "After some months' further experience of its beneficial action, new arrangements were made which enabled me to use it more generally and more frequently, and since then from fifty to eighty patients are *daily* submitted to its influence; many for its remedial action, but the greater number for motives of cleanliness; even these latter are wonderfully improved in appearance by its use, and have acquired the ruddy glow of health, instead of the pale and sickly look of invalids. . . .
>
> "Those who had suffered a relapse, after having been sent out cured, showed no unwillingness to return to the Asylum, and even asked to be taken there at once, *in order that they might get the Bath,* as they considered nothing else would cure them. *I have never seen any ill-effects from the Bath,* except a little nausea and a slight fainting in a few instances, but *after a Bath or two those effects disappeared.*"

Dr. Power states, that after the introduction of the Bath the per centage of cures rose from 59 to 76!—"being more than double the amount of cures produced by any Asylum in England," while deaths decreased fully one-half! No wonder that, with his experience, Dr. Power is earnest in recommending "*the introduction of the Bath into all public institutions.*"

The governors of the Limerick District Lunatic Asylum, enlightened by the experience acquired in the Cork Asylum, also wisely resolved to introduce the bath, and it was erected and opened in 1862. Dr. Fitzgerald, the Resident Medical Superintendent, says—"I am happy to have it in my power to record my opinion as to the *favourable results produced by it.*" He has found its administration attended "generally with *the most decided advantages*"—that it is "*a powerful auxiliary*" in the treatment of lunacy, and a "*useful medical adjuvant*" in the general diseases with which insanity is frequently accompanied. In England, similar experience has been obtained. In 1862 the Bath was introduced in connection with the Lunatic Asylum, Hayward-Heath, Sussex, and Dr. Lockhart Robertson, the medical superintendent reports, that—

> "As regards the use of the Bath in the treatment of mental diseases, I continue to entertain the most favourable opinion. As yet, we have no specific in the cure of insanity, such as quinine is for ague (?), and I, for one, do not look for such. Insanity is a disease depending on and associated with various functional disorders, and especially with the perverted nutrition of the organ of the mind. The treatment of these pathological conditions consists not in the mechanical administration of the specifics, but in the rational application of the principles of medicine to the special symptoms of each individual case.
>
> "Thus, to illustrate my meaning by a case—A patient is suffering from an attack of mania, with great restlessness and incoherence of thought and violence, with increased action of the heart, and congestion of the head, and suppression of the catamenia and of the secretions of the skin, which is rough and dry. The indications here are to restore the balance of circulation, and thus to regulate the secretions, and the supply of blood to the brain, and so to restore the healthy action of the uterus, the skin, and the brain.
>
> "Experience teaches us that such a result will only follow the slow and steady use of remedies influencing the action of the heart and of the nervous system. Of such remedies *few are more powerful in their action*

> *than the Bath*, and I find that *the continued use, in such a case, of this remedy will, through its soothing action on the nervous system, and the relief it affords to internal congestion, by determining the blood to the surface, modify, if not cure, the symptoms which mental diseases present.* . . . .
>
> "These few words on the use of the Bath in the treatment of the insane would be incomplete were I to omit to notice a specific power to remove the noxious secretions of the skin so frequent with the insane, and which, in the asylum of twenty years ago, one could recognise as distinctly as the smell of a dog-kennel, and which still refuses to yield to ordinary ablutions. *The Bath entirely removes this unpleasant complication.*
>
> "Lastly—The Bath is a remedial agent, grateful to the feelings of the insane, and which they do not, like *other means of washing, associate with the idea of punishment.*"

In the *Journal of Mental Disease*, July, 1862, Dr. Robertson published a paper of thirty "Cases illustrating the use of the Turkish Bath in the treatment of mental disease." The temperature he employed was 145° to 150°, but as he became more familiar with the action of heat he gradually increased the temperature, and he shares the opinion entertained by Dr. Barter, that, until the confident and judicious use of temperatures ranging above 200° are employed, we will never learn what the Bath is really capable of accomplishing in the curative treatment of many diseases.

In the *British Medical Journal*, Dr. Robertson relates a case in detail of a patient who was admitted to the asylum apparently in a state of confirmed dementia, restless and destructive, complicated with dropsy and albuminuria, and threatened with paralysis. He was admitted in February, and until the 10th of May he was treated with all the usual remedies applied in such cases, but, says Dr. Robertson, "he steadily lost ground; the delusions increased; the bodily health gave way; œdema of the limbs set in; and he was so weak he had to be carried to the Bath, and could hardly stand when he came up from it."

This was on the 10th of May when he took his *first* bath, and what was the result? Why, says Dr. Robertson, "in six weeks he was at work at his trade (carpenter), and in six months he was discharged from the asylum sound in mind and body, and able to earn a comfortable living." It was on the

30th of November he was "discharged on trial for a month. During the month he came to Hayward Heath to ask for a Bath. I found him sound in mind and body, and working for the Brighton Railway Company, in their carriage factory, at thirty-three shillings a-week." And on the 3rd December "he was discharged cured." The Doctor candidly remarks—"This cure was the only possible result which *I did not foresee.* I thought first that the case was tending to permanent dementia; then it looked as if general paresis of the insane would be the end; then it seemed as if he were to die from dropsy and albuminuria. I cannot but think that the Bath was the agent which rescued him from these perils, and restored him to health of mind and body."

Similar cases are not unfrequent; and it is now a demonstrable fact that there are no means by which curative effects can be produced in mental infirmities at all comparable with the agency of the Bath. Dr. Edgar Sheppard, medical superintendent of the Colney Hatch Lunatic Asylum, Middlesex, most fortunately for the patients entrusted to his care, took the opportunity when in Ireland, five years ago, of visiting the Cork Asylum, when he became acquainted with the Bath, and Dr. Power "*communicated to him his great satisfaction at the results which he had hitherto achieved through its agency.*" On his return to England, so impressed was he with a conviction of its value, that he at once urged the visiting justices to have one erected at Colney Hatch. Equally fortunate for the patients, the justices were enlightened enough to enter into his humane views, and adopt his advice. Accordingly a Bath was constructed, and opened in July, 1865, and, in his annual report, Dr. Sheppard thus records his experience:—

"It will be remembered by the committee that many of its members had a not unnatural mistrust of a power so susceptible of misapplication, and *so shrouded in prejudices by the community at large.* They will be glad, therefore, to learn from the individual who pressed it so strongly on their favourable consideration, that the Turkish Bath in Colney Hatch Asylum *has been an unqualified success.* Its power in many forms of disease—especially in melancholia—is most remarkable. Sleep is wooed by its soft influences, and morbid fancies chased away. It does not appear, as far as my experience yet goes, to shorten the paroxysms, though it certainly *mitigates the violence of acute mania.*

"That it removes many obstructions from our path, and *expedites ultimate recovery*, is, however, *as certain with respect to mania as melancholia.* It is known to those who are familiar with insanity, that one of its most striking characteristics is a remarkable dryness of skin. In many cases there is a peculiar odour from the scanty dermel secretions, which has given rise to, and almost justified, the common saying, that you may smell a madman anywhere! This state of things invites the action of the Bath. Dry epithelium is peeled from the human covering; poisonous exudations crowded upon it in crystal beads; and not by the lungs only, but by the neglected skin, is oxygen drifted into the circulating current of the blood.

"One of the most noteworthy things in connection with the Bath is the dread with which many patients contemplate its earlier, and the satisfaction with which they regard its latter exhibitions. The measure of its enjoyment becomes the measure of its usefulness and success."

Dr. Sheppard states that since the Bath has been opened it "has been visited by many strangers, who have heard of its construction, and by visiting justices and medical superintendents from other asylums, with a view of introducing the same therapeutic agent into the establishments with which they are officially connected," and it is his earnest hope that, in a few years, no county asylum will be without one.

Dr. Sheppard subsequently published the excellent and instructive treatise, from which we have quoted, on *Bathing*, &c., in which he considers the agency of the Bath in relation to disease generally; while he refers more particularly "to the beneficial effects which are likely to accrue, and have already accrued, from thermal agency in the treatment of lunacy." He has not, like some writers, sought *to misrepresent the facts connected with the revival of the Bath*, but admits that "Ireland was that part of the United Kingdom where the Bath first found a home, and where it has been received with less disfavour and prejudice than in England, and where its results in the treatment of insanity are best known." And he says, "the functional disturbances which are leagued so extensively with insanity, the imperfect nutrition of the brain, and, above all, the peculiar condition of the skin, invite the action of the Hot-air Bath, on reasonable grounds, with abundant promise of success."

Alluding to the power of the Bath to remove the noxious secretion of the skin, he says—"The Bath is calculated to remove this unpleasant complication. This peculiar fœtor would seem to be owing, according to Dr. Thudichum, to a crystalline deposit round the mouth of the sweat glands, which becomes decomposed, producing carbonate of ammonia, in combination with volatile acid; and he says that *healthy fresh sweat from a clean skin* has *a most agreeable odour*, or none at all,"—*Bathing*, &c., p. 26.

We need not give any further evidence on this subject, for it is one concerning which no medical man has yet ventured to "hint a fault and hesitate dislike." Few of them, indeed, know anything about mental disease, and even some, who profess to have made its study and treatment a *speciality*, exhibit the most humiliating psychological and physiological ignorance when tempted to appear in a court of justice and enter the witness-box.

It is not to be expected, however, that those who are professionally entrusted with the custody of the insane will, as a rule, follow the laudable example of Drs. Power, Fitzgerald, Robertson, Sheppard, and the very few others who have, most honourably for themselves, and with a true Christian philanthropy, conscientiously endeavoured to afford the unfortunate patients confided to their care all the advantages that such an agency as the Bath is calculated to confer. Experience testifies that the great majority are quite content to jog on in old ways of routine treatment, without giving themselves any trouble about whether the Bath is an invaluable Therapeutic or not.

It is now seven years since the Bath was first made available as a remedial agency in the Cork Asylum, and no one acquainted with the treatment of the mentally afflicted can, without self-condemnation, plead ignorance of the beneficial effects that have followed its use. Dr. Power has always been most anxious to afford his professional brethren any information concerning its remedial influences; and the reports, more particularly of Drs. Robertson and Sheppard, now some years before the profession, ought surely to have inspired every superintendent of an Asylum with a desire to follow their laudable and humane example. Is it creditable that such has not been the case? Is it creditable to their profession, and to their humanity, that an appeal should be necessary to other influences to spur them to the discharge of the most solemn obligations they have voluntarily contracted by their professional position?

That appeal now lies to the Governors of Asylums in Ireland, to the Visiting Justices in England, and the Commissioners of Lunacy in Scotland. They cannot excuse indifference in this matter by pleading "the doctor's opinion." It is their paramount duty to investigate and judge for themselves, and there is no way of evading their responsibility. The salutary effects of the Bath is not a matter to be judged by any doctor's opinion; *it is a matter of simple evidence*, concerning which the intelligence that rules in a "common jury" is just as competent to judge as all the colleges of physicians in the United Kingdom combined, and, indeed, with a vast deal more probability of an unbigotted and impartial verdict being returned.

Public officials and public boards are, no doubt, difficult and slow to move; but there is no excuse—there can be none for an apathy that amounts to inhumanity. An agent at once *safe* and *powerful*, *agreeable* and *economical*, is offered, fully tested by experience, and certified as incomparable in relieving various phases of the most terrible disease humanity can be afflicted with, and is it creditable to the civilization and intelligence of our age, that an active philanthropy should be wanting to make it available?

## CHAPTER XXIV.

*Tubercular diseases, their variety and malignancy—Conflicting Physic remedies all abortive—The testimony of Sir John Forbes—Sources of Tubercular disease—The curative properties of the Bath and Hydropathy—A change of climate delusive and unnecessary—What sound Physiology dictates to be done.*

CONSUMPTION has been incidentally alluded to as one of those forms of disease over which the Bath exercises a powerfully remedial influence. "Among the whole range of human infirmities," observes Sir James Clarke, "tuberculous diseases are the most deserving the study of the physician, whether we regard their immense frequency or appalling mortality. Confined to no country, age, sex, or condition of life, *they destroy a larger proportion of mankind than all other chronic diseases taken together.* If we add to consumption, tuberculous disease of the glandular system, of the brain, of the large joints, of the spinal column, &c., we shall probably be within the truth in stating that *one-third* part of the mortality of this country arises from tuberculous diseases; and if to this frightful destruction of mankind we add the numerous crippled and disfigured sufferers whom we daily meet with, the blind, the deaf, and the maniacal—for mania is not an infrequent form of this disease—and, above all, the painful reflection that the predisposition to this destructive class of maladies is transmitted from the parent to the offspring—we shall surely have no need to press upon medical practitioners the claim which tuberculous disease has, above all others, upon their earnest consideration. —*Cyclopædia Pract. Med., Art. Tubercular Phthisis.*

Like cholera and other serious diseases, *consumption* has utterly baffled all the resources of Drug medication. The remedies proposed have been as various and conflicting as the opinions entertained respecting the nature and cause of the disease itself. As Sir John Forbes observes:—

> "It is a melancholy fact that *no plan of treatment hitherto proposed can boast of even the humblest success in permanently arresting the progress of this dreadful malady.* It is at once melancholy and humiliating to review the enormous farrago of drugs and agents of different kinds brought forward, within the last few years, as more or less infallible cures for Phthisis; brought forward, too, for the most part, by men within the pale of the profession, and then to reflect on *the present position of those remedies in the estimation of all rational and experienced practitioners.* Should not this consideration alone teach us that the propounders of such remedies *were all on the wrong track?*"—*British and Foreign Medical Review*, vol. xix., p. 140.

The following are only a portion of the "remedies" Sir John alludes to:—Chlorine inhalations; iodine inhalations; mercury; hydrocyanic acid; creosote; iodide of iron; digitalis; sal ammoniac; carbonate of potassa; common salt; chloride of lime; inhalations of the vapour of tar; the production of emphysema by a system of forced respiration; dry cupping or traction; liquor potassa; the application of a seton; daily vomiting under the influence of emetics; iodide of potass and sarsaparilla; cod liver oil; wet linen rags to the chest; mechanical extraction of the tuberculous matter through the walls of the chest; besides which there have been numberless other quackeries recommended and prescribed by physicians more eminent for the practice they have managed to obtain than for the possession of physiological wisdom to guide them. The propounders of all such remedies, so repugnant to Nature, *could not possibly be on the right track*, for, if Consumption is ever to be arrested or cured, it is by following what Sir John describes as "*the physiological, hygienic, or natural system of curing diseases, in contradistinction to the pharmaceutical or empirical drug plan.*"

That Consumption is curable by such a plan of treatment, which is essentially the Hydropathic plan, admits of no doubt whatever, but, as a general rule, that treatment is not resorted to in time. In the early stages of the disease, when its cure is most practicable, the baneful practice of drugging is followed, until between the drugs and the disease the constitution of the patient becomes so impaired that cure is hopeless, and all the most skilful Hydropathist can then do is to mitigate suffering and procrastinate the fatal issue.

No thoughtful, experienced, and conscientious practitioner is now to be found professing faith in any plan of *Drug treatment* as curative of Phthisis. Dr. Hayle Walshe, one of the most recent writers on the subject, admits that medical art may aim at palliation, but cannot legitimately aim at curing. He says:—

> "Experience shows that the treatment of the phthisical may, with legitimate confidence, aim at either maintaining a *status in quo*—at producing *slight* local and general improvement or marked improvement of this kind —at effecting a total removal of *subjective symptoms*, while the physical signs remain partially active—or at accomplishing total removal of the *symptoms*, and bringing about a quiescent state of the physical signs, while the general health, weight, and vigor have improved to such an extent that the patient shall *believe* himself totally free from disease, and that the medical observer might be *disposed to share his opinion, did not passive physical changes remain.*
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> "I say medical art may legitimately aim at these ends, because, on the one hand, these ends have been actually obtained; and, on the other, *the man has not yet appeared who can point to results more perfect than the best of these, as the positive, direct, and traceable effect of any known system of medication.* This latter clause is not in the least at variance with the well-known fact, that Phthisis sometimes spontaneously undergoes permanent suspension of its course."—*Practical Treatise on the Diseases of the Lungs*, third edition, p. 501.

But the system of medication which Dr. Walshe recommends, as likely to bring about any of these partial results is not confined to *Drugs*, but is largely Hygienic, for Hydropathy has already achieved the signal triumph of having, to a considerable extent, revolutionized physic practice in the treatment of chronic disease. The "heroic practice" of a quarter of a century ago is now almost universally superseded, yet Physic

Doctors, while they are learning to pronounce the term *Hygiène*, still rail at Hydropathic principles and sneer at their application; at the same time, however, they covertly pilfer those principles and apply them in their own practice, for no sensible practitioner has now faith in the "pharmaceutical filth" he works with to cure any chronic disease.

Even Dr. Walshe concludes that "*equal* in importance to the medicinal treatment of the consumptive is their Hygienic management," but the result is that, by combining such opposite and antagonistic systems of treatment, the good naturally produced by "Hygienic management" is neutralised by the destructive drugging of the "Medicinal," and even when not entirely neutralised, the good produced is falsely ascribed to the "medicinal treatment," and thus the delusion is kept afloat that there is some natural remedial virtue in Physic—that drugging, in any form, is a natural and salutary process.

Tuberculous disease is either the product of predisposing causes acting on an inherited predisposition, or is the effect of improper habits of life that induce tuberculous cachexia—that is, a depraved condition of the body which predisposes to the disease.

I. "That pulmonary consumption is an hereditary disease—in other words," says Sir James Clark, "that the tuberculous constitution is transmitted from parent to child, is a fact not to be controverted; indeed, we regard it as one of the best established points in the etiology of disease." Parents labouring under tuberculous cachexia not only entail on their offspring a disposition to the same affection, but there are other diseases a predisposition to which is also transmitted by that bodily condition of parents. Dyspepsia, which results from an impaired state of the digestive organs, is so inherited, and is the prolific source of torturing ailments that

—"Make sleep a pain,
And turns its balm to wormwood."

"The mischief which springs from the disorders of the functions of digestion is not limited to the individual," says Dr. T. J. Todd;

"*it extends to the offspring;* for the disposition of these diseases being hereditary and increasing in virulence as it descends, the dyspepsia of one generation becomes scrofula, consumption, or some other malignant disease in the succeeding ones; hence the decay and extinction of families, and all the manifold attendant miseries." "Of all diseases," says Sir James Clark, "we consider dyspepsia the most fertile source of cachexia of every form, for this plain reason, that a healthy condition of the digestive organs, and a proper performance of their functions, are essential to the due preparation of the food, and consequently to the supply of healthy nourishment to the body. The adjusting powers of the system may do much to correct a disordered condition of the different functions concerned in the progress of assimilation, by means of the increased activity of the healthy organs; but the system cannot continue long in a healthy state when any one important function connected with nutrition is materially deranged."

Here, then, we have one great source of tuberculous disease, and it is now generally admitted that the "medicinal treatment" of children with a view to correct constitutional predispositions, and obviate those derangements which increase and develop such predispositions, is not only utterly futile and illusory, but positively injurious. Medicine only tends to magnify the latent evil—to nurse it into mischievous and fatal maturity, while the only treatment that can on sound physiological principles hope for success—nay, ensure success—when skilfully directed and judiciously followed, is what Sir John Forbes characterised as "*the physiological, hygienic, or natural system in contradistinction to the pharmaceutical or empirical drug plan*"—that is, Hydropathic treatment which, as we have explained (page 216), keeps inherited predispositions in check, counteracts or eradicates them altogether, by strengthening and invigorating the natural functions of life.

We have seen how strongly enlightened scientific members of the medical profession have testified in favour of the Bath as the most generally applicable, the most powerful, salutary, and agreeable of all Hydropathic agents, while over all inherited predispositions to tuberculosis or other diseases, the Bath exerts a sovereign corrective influence with which there is nothing in nature or art to compare. In neglecting such a means of counteracting in themselves the cachectic state of their system which is transmittible, parents incur great moral culpability; but infinitely greater wickedness is committed when, for their own sensual gratification, they transmit an inheritance of disease to their unhappy offspring. "When," asks Dr. T. J. Todd, "will parents, besides, if not before, wealth and happiness, think of *bequeathing health to their children?* When will the physical state of the body cease to be deemed an unworthy means of promoting our moral—our religious improvement?"—*Cyclopædia of Pract. Med., Art. Indigestion.*

The Bath, allied with skilful Hydropathic treatment, offers an almost certain means by which inherited morbid predispositions can be readily counteracted in children; but if parents or guardians prefer to have them tortured by drugging into developed disease, or by the culpable neglect of ordinary precautions, hurried into premature graves, what can be done with such defiant wickedness? The crime and the punishment be on their own heads.

II. The other causes that induce a cachectic state of the system which may result in consumption or other pulmonary affections; in diseases of the bronchi and pleura, in gout, cancer, cutaneous affections, etc., etc., are all more or less identified with *mal-nutrition,* to rectify which, as we have seen, there is no agent so powerful and efficacious as the Bath when employed under competent direction in conjunction with other Hydropathic means. Imperfect food in quantity and quality, impure air, too much or too little exercise, improper clothing, excessive labour physical or mental, and the vicious indulgence of passions and appetites—all contribute to derange the functions of Nutrition, and induce the abnormal bodily condition termed cachexia, or predisposition to disease.

It is obvious, therefore, that when disease is so induced—

when it proceeds either from inherited or acquired predispositions, the organs more particularly engaged are those employed in Nutrition. . Hence, Erasmus Wilson says, "scrofula is imperfect nutrition; cancer is imperfect nutrition; indigestion, rheumatism, gout, neuralgia, are imperfect nutrition. Give a power by which nutrition can be regulated, and *you can immediately control these various diseases.* Now, there is no power by which the proper direction of nutrition can be attained excepting through the skin, and that I believe to be *the explanation of the extraordinary results which seem to flow from the Bath.* The Bath does no more than regulate nutrition." Nothing more, certainly—all the rest is done by Nature.

Dr. John Balbirnie, who has devoted considerable ability and attention to the elucidation of this subject, has conclusively shown that perfect nutrition can only consist with perfect depuration—that is, the perfect action of the excretory functions of the skin, lungs, and liver. In this all enlightened physiologists agree.

> "The structure and functions of man," he says, "show that he was not by any means intended to be a *sedentary animal.* Those who live the longest and enjoy the best health are invariably persons of active habits. From the moment man becomes a civilized being the depurating process of his blood becomes less perfect; in other words, the grand excretory functions of the skin, lungs, and liver, are less completely exercised. From that moment diseases of various type and class, and one large class in particular—tubercular diseases (scrofula and consumption)—begin to show their ravages on his frame. And the reason of this is very obvious. Man's habits and modes of life become then less conformable to the instinctive requirements of his constitution; his exercise is less frequent or less natural—either unremitting or not at all; his lungs are compelled to long periods of comparative inactivity; and his skin is equally diminished in function by loads of superfluous clothing, as well as made susceptible to every atmospheric variation by all sorts of 'coddling' in warm rooms.
>
> "By these and sundry other anti-hygienic influences, the blood of the civilized man is infinitely less oxygenated than it should be. He voluntarily debars himself of the means of carrying off the effete matters of his body. When the lungs are imperfectly exercised, it is impossible for the skin to be healthily active in its duties; for the two go together, co-functionate, if we may coin a word. Baths, of the old sort, and cleanliness were the best compensation the case admitted. But nothing—*save*

*some such substitute as that now presented to the public in the shape of the Turkish Bath*—perfectly compensates the want of active exertion in a pure air; for nothing else can perfectly open, and keep open, the body's safety-valves, or secure the perfect elimination of the corporeal waste. . . .

"The foregoing observations are a high plea, if they do not constitute an unanswerable argument, for the Turkish Bath *to be established among us co-extensively with the evils it is designed and fitted to grapple with.* . .

"If I were asked to give a brief and distinctive definition of the Turkish Bath, I would say—It is that which claims *the exclusive or pre-eminent power of physiologically opening the safety-valves of the living mechanism*, or, in other words, developing a high activity of the depurating economy of the animal body; and so fulfilling *the first grand indication for the cure of all diseases.* If wielded by courageous and skilled hands, no artificial or medicinal system will be able to compete with it, either as respects the quantity or quality of its cures. How precisely adapted it is to arrest the ravages of scrofula and consumption all theory now declares—if facts failed to speak.

"And we do anticipate and predict an immense decline in the prevalence and mortality of those maladies *from the time of the general establishment and patronage of the Turkish Bath among the Western people—now their greatest victims.* Among Eastern nations who use the Bath this desolator of European hearths is almost unknown. *Ecce omen.*

"The practical views now suggested in connection with the Turkish Bath, when pushed to their legitimate consequence, will operate, we believe, a great revolution one day in medical treatment; and will influence for good the destinies of thousands of unborn generations."—*The Physiological Basis and Curative effects of the Turkish Bath*, p. 10, etc.

Sir James Clark is of opinion, in which he is joined by other authorities, that whether tuberculous diseases have diminished or not among the labouring part of the population, during the last half century, "*they have increased in the upper and middle ranks of society.*" He says "we have all an opportunity of observing and comparing the state of health of the rising generation with that of their fathers and grandfathers. On taking a survey of the constitution of these three generations, we think it will be found, in a large proportion of instances, that the deterioration of health is progressive from father to son."

Undoubtedly this is true, and it is mainly caused by the transmission of morbid predispositions from parent to offspring. "A couple," says Dr. Walshe, "of whom one is phthisical, marries, with *the calculated surety that on the lowest computation* 26 per 100 of their offspring will inherit the same disease. *Beyond this,* the chances of rickets, and of the external acknowledged forms of scrofula, exist in a certain but undetermined ratio." Nor is idiotcy to be forgotten "as a possible infliction." And the same writer holds the opinion—"so widely is the phthisical element diffused among us, that if tubercle were regarded as a barrier to marriage, a diminution of the population, sufficiently sensible to prove of serious political import, might shortly be anticipated!"

This shows how essential it is to national well-being that the Bath should become a national institution. All inherited morbid predispositions come under the head of *preventible disease,* and surely no higher purpose could animate the government of an intelligent and free people, than so to inform and direct that intelligence as to develop in them physical and moral health?

But were we to extend our observation to *other sources* of transmitted disease and predispositions thereto, the extent of preventible disease that afflicts civilized society would become frightful to contemplate. Dr. Bernies, an American authority, states he "has found that *ten* per cent. of the deaf and dumb, and *five* per cent. of the blind, and *fifteen* per cent. of the idiots admitted into the various charitable institutions of the United States, are the issue of marriages of first cousins." That is 30 per cent. in all, which, however, is very far from truly representing the total product of disease—the magnitude of all the evils that flow from this source. Besides, there are other causes, fearfully prolific, to which it is not our purpose to refer. It is sufficient to repeat, that in all cases of transmitted disease, or of inherited proclivities thereunto, the habitual use of the Bath from infancy, with proper diet and regimen, is the only means that can be confidently relied on for counteraction, eradication, or cure.

The medicinal treatment of consumptive patients generally ends in ordering those who can afford it to go abroad and die.

Such patients are usually kept at home and drugged until their vital organism becomes so impaired as to be beyond all chance of reparation and cure. They are then cruelly advised to wander abroad—to forego all home comforts, in the delusive hope that any change of climate could possibly avert their fate. Even Sir James Clark admits the generally deceptive character of such advice. "For the most part consumptive patients are," he says, "sent abroad one year at least, often several years, *too late* to derive *any* benefit from change of climate." But what are they sent abroad at all for? Oh! to enjoy the curative power of a milder climate, is the ready but delusive answer. Now, *the climate of the United Kingdom is just as suitable for consumptive treatment as any other climate in the world;* and much more so in many respects, for they can command home comforts, which are not obtainable elsewhere.

In his work on *Consumption and Scrofula*, Dr. Balbirnie says—"This whole subject requires reconsideration both by the profession and the public. The practice of sending consumptive patients abroad is based on very inadequate, even very false considerations. The alleged influence of climate in the causation and in the cure of consumption is now discovered to be *an entire mistake.* There is no city of refuge, no land of promise abroad for the consumptive. Of this let them be well assured. In fact, *a total misconception* as to the objects to be attained by change of climate lies at the foundation of the custom. In nine cases out of ten *fashion* dictates the step, not *science.* We are decidedly against fleeing from home altogether. At best it is bootless, unnecessary. *Every object*, we contend, *can be gained in our own country;* and in this opinion we are not singular, for it is now becoming the prevailing opinion of the profession, founded on the best data."

Dr. Hall declares that "all expatriation is vain." Dr. Burgess affirms that "to send patients to Italy, or to the south of France, for the benefit of their health, is a mistake, and that the climate of the United Kingdom, as yet very partially understood, will afford to the English consumptive invalid as great, if not greater, chances of recovery than that of either of the former countries, provided a proper locality be selected."

Of *Malta* he says—"I do not remember ever to have felt the sensation of cold so acutely in England as I have done in Malta during a dry north-westerly or north-easterly wind. In the Naval Hospital in that island the deaths from consumption in 1842 were 30 per cent."

Of *Montpelier* and *Marseilles* the same authority says—"There is no part of France where the disease is so prevalent among the native population, in the latter especially, where the ravages of the disease among both sexes are very great."

*Nice*—"All practitioners, native and foreign," says Dr. Balbirnie, "acknowledge the prevalence of consumption in Italy. More natives die of consumption in Nice than in any town of the same population in England. M. Vallery declares that the climate "hastens the end of persons attacked by pulmonary consumption," and affirms that it is "the last place to which a foreigner labouring under tubercular phthisis should resort."

*Italy*—Dr. Pollock says of Lombardy that "a locality equally injurious to persons suffering from consumption could not be found in any part of the United Kingdom or of central Europe." He says that Genoa and Florence are specially unsuitable for the consumptive, the one being liable to sudden gusts of wind and violent transitions of temperature, the other to extreme cold in winter and prevalence of northerly winds. Rome and Naples are equally unfavorable as a residence for the consumptive, and the fact that in the former city there is a consumptive hospital speaks for itself.

*Madeira*—Dr. Renton declares that of those who are sent to, and remain at, Madeira with suppurating lungs, nearly all die, and in as short a time as they would have done at home, and very probably much quicker. Dr. Mason, who lived at Madeira two years, and spent his time in making minute meteorological observations, arrived at conclusions very damaging to its reputation as a resort for consumptive patients. He describes the climate as no more to be relied on than any other place for certainty of fine weather; that it was saturated with humidity during the greater part of the year, much more so than even London; its high temperature enabling it to contain a larger amount of moisture, it was even more prejudicial to the human constitution; that its dampness was such that it was impossible to keep iron in any form from being rapidly oxydised; that deliquescent substances were rapidly saturated with moisture; and that consumption and scrofula were frequent among the natives—a point remarked by other physicians.

*East Indies*—Dr. Green says—"I have seen so much misery in private families, and so much harm in the publio service, arise from the false views that prevail respecting scrofula and consumption being benefited by a tropical climate that I feel bound to state my conviction that Bengal, at any rate, is most inimical to these diseases. I have seen medical men, clergymen, officers in the service, &c., who have told me, when surprised with the fatal turn of these diseases, that they expected to get well here. I have seen young and beautiful European ladies carried off with appalling celerity. I have seen quite young soldiers who, if they do not quickly die, are sent home wholly unfit for this or any other service. I have visited Penang and Singapore, nor can I think, from my observations there, that they in any way retard the fatal issue of consumption."

Dr. Mason gives it as his conviction "that *Nature has adapted the constitution of man to the climate of his ancestors,*" and entirely condemns change of climate for the consumptive constitution. He contends that change of air at home will effect whatever good climate can effect in consumption. "The population of cold climates evince no peculiar liability to scrofula or consumption, nor do those hot climates evince any peculiar exemption." British soldiers in Canada are even less affected with those diseases than in the West Indies, where consumption is more rapid among them than at home. Consumption is rare in Greenland, Lapland, Iceland, and

Russia—countries which ought to be rife with the disease, if simple inclemency of climate has aught to do with its causation.

The records of the British army show the extra frequency of consumption in southern regions as compared with northern. The proportions of attacks at the various stations is thus given —Jamaica, 13 per 1,000; West Indies, 12; Bermuda, 9; Canada, 6½; United Kingdom, 6½. And in the United Kingdom the mortality from tubercular disease is not greater in the cold than in the warm seasons of the year.

In short, as Dr. Balbirnie sums up:—

> "*Every end the consumptive patient seeks in going abroad may be obtained at home*, without the expense, hardship, peril, inconvenience, and the severance of life's best ties that attend expatriation.
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> "The grand desideratum in the matter—that which gives expatriation any advantage it ever claimed—is not change of climate, but *change of habits and of Hygiene.* This is the point to be insisted upon when we talk of the agency whereby consumption is to be arrested.
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> "In whatever place, by whatever system of treatment, a patient is permitted to live more in the open air, and to breathe a purer atmosphere —to take more exercise—to cultivate a healthier activity of the grand excretory functions of the body, the skin, lungs, and bowels—to live freer of disquieting cares and anxieties, and to follow out a more carefully planned diet and regimen than heretofore—there he will run the most certain chances of cure. These are the things implied in a change of climate—the conditions on which alone hang the hopes of cure."

From these considerations it will be understood that the soundest and kindest advice it is possible to give patients is, that *they should remain at home*—that, eschewing all physic quackery, those who possess the means should at once, without loss of valuable time, select some Hydropathic establishment where under skilful treatment their disease may be certainly arrested, perhaps completely eradicated, when taken in its incipient stages. Patients may be assured that the Bath far more than supplies all that change of climate was ever assumed to be capable of yielding—that infinitely greater relief is certain to be derived from it in all diseases, even the most malignant and in their worst stages, than from the most genial climate and the most artful manipulation of physic; while its curative properties are incomparable.

"It is absurd," says Dr. Tucker, "to send consumptive patients to hot climates when they can have higher temperatures at home, at less expense to their physical strength and pecuniary circumstances. When under the beneficial influence of a Hot-air Bath of a temperature to suit each particular case, they can have in two hours more impurities of blood removed from the system, through the skin, than could be removed in a two months' residence in a warm climate."—*The Reformed Roman or Oriental Baths*, p. 30.

Besides, it is totally impossible for any climate, no matter how genial it may be, to do for an invalid what the Bath has proved its capability of accomplishing. A foreign residence, in addition to other discomforts, necessarily involves more or less of physical fatigue, if not of mental anxiety, and this at a time, too, when the patient's vitality should be most carefully husbanded. The Bath, on the contrary, never causes physical fatigue, while its influence on the mental state is most soothing and salutary—it always strengthens and exhilarates.

Wisely guided, then, patients will seek relief at some Hydropathic establishment at home, where they will enjoy home comforts, and have combined with the Bath all the health-giving resources of scientific Hydropathy. They may repose implicit confidence in the assurance, that by such means *alone* can predispositions to disease, and disease itself, be successfully encountered, overcome, and cured. Failing Hydropathic means, consumption, like some other forms of disease, is absolutely incurable by art, and patients should reflect on this, for what is curable up to one stage becomes incurable when that stage is passed. Let not valuable time be wasted in the miserable and fatal folly of aggravating disease and lessening the chances of recovery by following the destructive process of physic doctoring—a course against which common-sense and sound physiology alike protest most vehemently.

## CHAPTER XXV.

*Legislative provision for the voluntary establishment of Baths, etc.—The Acts permissive and inoperative—Sanitary Legislation ought to be compulsory—Duty of the Government.*

THE utility of Baths as public institutions has been incidentally referred to, and the Legislature more than twenty years ago acknowledged the duty of making provision for their establishment. In 1846 an Act (9 and 10 Vict. cap 74) was passed for England, to encourage the voluntary establishment of public Baths and Wash-houses, and in the same session a similar Act (cap 87) was passed for Ireland. The preamble sets forth that "it is desirable for the *health*, *comfort*, and *welfare* of the inhabitants of populous towns and districts" that such institutions should be established, and power is given to corporate bodies by voluntary assessment to raise funds for that purpose. In England some Baths were erected under the Act, but the Irish Act has remained a dead letter.

It was not till ten years after the passing of these Acts, that the Oriental Bath was revived by Dr. Barter, and its extension throughout the United Kingdom assuredly has done a great deal to promote "the health, comfort, and welfare of the inhabitants of populous towns and districts," but all that has been done is utterly insignificant in comparison with what remains to be done in order to afford anything like proper bathing accommodation for the great bulk of the population.

In 1866, under the panic of a threatened Cholera invasion, *The Sanitary Act* (29 and 30 Vict. cap. 90) was passed for the United Kingdom, and under the 23rd section power is conferred on local authorities to provide a proper place and the necessary apparatus and attendance for the disinfection of clothing, etc., and under the 43rd section local authorities may adopt the Act for the Establishment of Public Baths and Wash-houses, the expenses to be defrayed out of the district rate.

The supreme authority for enforcing the provisions of the Act in England is the Secretary of State for the Home Department, and in Ireland the Lord Lieutenant in Council, but as the dread of Cholera passed away comparatively nothing has been done in taking advantage of the comprehensive provisions of the Act, to promote "the health, comfort, and welfare of the inhabitants of populous towns and districts" as far as the erection of public Baths is concerned.

The great vice of such legislation is that, to a large extent, the care of the public health is left *discretionary* with local authorities, and not rendered *compulsory*. Unless under the pressure of actual threatened danger from pestilence, local authorities, Boards of Guardians, Municipal Councils, etc., have shown that they will not *voluntarily* avail themselves of the powers conferred on them by Parliament to promote "the health, comfort, and welfare" of the population by adopting proper precautionary measures for the *prevention* of disease. With ample powers to do so, experience has shown that there exists a most reprehensible indisposition—whether arising from ignorance, prejudice, or a callous indifferentism—to make those powers available.

It may be said that the apathy of Local authorities, in this matter, is but a reflection of that of the public generally, and no doubt this is in a great degree quite true, therefore it is so desirable that the public mind should become enlightened and seriously alive to the politic wisdom that declares "prevention to be better than cure." The general public have yet to learn how much more economical it is to *prevent* the spread of disease than to provide remedies for its treatment by the ordinary operation of our medical charities. Millions sterling are annually expended in maintaining dispensaries, hospitals, infirmaries, and asylums for the treatment of disease, while no consistent efforts have yet been made to preserve the public health, by the adoption of rational preventive measures directed to the social condition and moral habits of the population.

An eminent medical authority has said—"We, up to this time, have always paid our doctors for curing diseases, not for *preventing* them, and, consequently, very little of this unprofitable, viz., *preventive* hygiene, has been taught in our schools, or is to be found in our medical treatises." We have, in fact, dealt with disease on the same vicious system that we applied to the repression of crime—we provided a complex and costly machinery for the detection, conviction, and punishment of criminals, but bestowed little attention on the eradication of the germs of vice in the rising generation—the source whence the criminal ranks are so plentifully recruited. A more enlightened intelligence has, however, of late years, been directed to the investigation of the vital questions of Social Science, and all men whose opinions are entitled to any consideration or weight concur in admitting that the true way to check crime is by judiciously operating on juvenile offenders. Formerly, and to a large extent still, our pernicious system was, and is to foster juvenile offenders, and, in truth, educate them in crime, from the petty larcenies that received a fortnight's imprisonment up to the serious offences that entail death or penal servitude. The Reformatory system, though very partially applied as yet, is a great step in advance. Improved classification in jails, with more intelligent prison administration, affords evidence of progress in the right direction, but as yet we are only on the threshold of great changes which must ultimately be carried out.

In like manner our whole system of *medical charities* is vicious in principle because it is mainly designed to deal with *developed* disease, and not to anticipate its insidious approaches, counteract its latent tendencies, and arrest or avert their development. Independently of public sanitary measures, as yet but very imperfectly enforced, *preventive* Hygiene forms no part of our whole expensive Dispensary system, nor is it understood or applied as it ought to be, either to the general preservation of public health, or in the private relations of life.

We must take into consideration that, as regards sanitary measures, affecting public health generally, there are two essential distinctions to be observed. We must distinguish between measures that can be enforced by public law, and those even more essential measures which legislative enactments may, in some degree, encourage, but cannot directly enforce. For example, the compulsory enforcement of measures relating to Sewerage, the regulation and inspection of Lodging-houses, etc., is strictly within the province of the Legislature, and safeguards can be provided to a large extent against the inroads that would otherwise be made on public health. But with respect to enforcing such precautions on the part of individuals, as are necessary to eradicate or keep in subjection hereditary predispositions to disease, or to preserve a sound condition of bodily health by restraining intemperate habits, and observing in daily life sanitary rules conducive to health—it must be quite obvious that the Legislature is altogether powerless. The wisest precautions Parliament could devise, with a view to practical enforcement, could act but very indirectly and partially, at best, on the great mass of home-bred disease, and more especially predisposition to disease, which, in our civilised and highly artificial life, is unfortunately born into the world with so large a proportion of our population.

And this complete failure of legislative power is easily accounted for. The sanitary precautions necessary to operate effectively on such sources of disease are so intimately blended with the social and moral habits of all classes, with the private life of individuals, that it would be utterly impossible to make their enforcement the subject of legislative action—they must necessarily be left to the guidance of individual intelligence and conscience.

By keeping this distinction in view, we will be better enabled to arrive at practical ideas as to where legislative action must cease and individual responsibility commence. We will understand more clearly what is legitimately within the functions of Parliament, and what must of necessity be left to individual action. For instance, it has been pretty accurately ascertained that fully one-fourth of the children that are born in Great Britain die within the first year of life, one-third under two years, and one-half before they reach the eighth year. Two-thirds of mankind die before the thirty-ninth year, and three-fourths before the fifty-first. Four-fifths of this mortality is caused by preventible disease. In London, it is computed that out of every 20,000 deaths only 434 arise from "casualties" and 1,614 from "age and debility," the balance 17,952 being mainly referable to diseases arising from *preventible* causes. In the United Kingdom the calculation is, that fully 60,000 persons above twenty-one years of age die annually from the abuse of ardent spirits, but the amount of mortality arising *indirectly* from their excessive use cannot be estimated with any approach to accuracy. It is known, however, that more than 90 per cent. of all the medical cases which are treated in our hospitals, infirmaries, and dispensaries, including also those met with in private practice, arising from *preventible* functional derangements of the organs of health, clearly traceable to hereditary predisposition, or to intemperance, improvidence, and profligacy, as well as to the disregard of the ordinary rules of Hygiene in daily life.

Such being the case it will be at once apparent that no sanitary measures possible for a Government to enforce could grapple with the mortality arising from the sources indicated. The causes are, it may be truly said, altogether beyond legislative control, because it is impossible for legislative enactments to direct and supervise the moral and social habits of a people, or enforce individual obedience to Hygienic laws in private life.

It is at this point that other influences come in, and must be relied on. By instructing the public mind and elevating the tone of moral feeling, educational and religious influences may do much towards improving social habits, and leading to a more just appreciation of the great purposes of life, and if we had a truly enlightened Medical Profession of high moral tone, to its members would more peculiarly belong the recommendation of those household sanitary virtues by which predispositions to disease may be averted or subdued, and a mode of life adopted favourable to the preservation of health.

Whatever is reasonably within the province of Government to order or sanction, and of municipal administrations to carry out, with a view to moral action on the public mind, ought unquestionably to be done. Public parks, as places of healthful recreation for the inhabitants of our over-crowded towns, should be provided, and public baths to create and foster habits of cleanliness. Such sanitary measures ought not to be permissive merely, but should be made compulsory on all municipal bodies in large towns, more especially as regards baths. It has been truly said that large towns and cities are the theatres on which the violent passions find their appropriate scene; in them the desperate struggles for life are decided, and they afford the constant temptation to an excessive indulgence of every appetite. The atmosphere, the scanty exercise, the irregular hours, all add to the depressing influence of civic life, and contribute to the generation and development of disease. "Cleanliness," we are told, "is next to godliness," and we know how preservative it is of physical health; but it is a mockery to preach to the great mass of our population concerning its virtues when the means are beyond their reach.

Every muncipality ought to be compelled to provide sufficient bathing accommodation for the people. The Acts of 1846, and of 1866, which have been so shamefully allowed to remain a dead letter, *ought to be made compulsory*. Baths and wash-houses combined would soon become valued and self-supporting, while the people would be educated to appreciate the healthful habits of cleanliness. The experience acquired during the last twelve years, the results of which can be gleaned from these pages, concerning the great prophylactic properties of the Hot-air Bath renders it unquestionably the best that could be adopted for the public. It combines in a remarkable degree utility and economy, and there is no town in the United Kingdom in which, with ordinary prudence in construction and management, one or more public Hot-air Baths could not be made *entirely self supporting.* We point to the simple fact, that in the city of Cork there are *four* Baths, only one of which was purposely designed for the poorer portion of the population; the others were established as private speculations, and are paying very well.

But we repeat, that, as a rule, we cannot look to the enlightened intelligence of Municipal Councils to move in this matter. Whatever might be done under the alarming pressure of actual pestilence decimating the population, there is scarcely reasonable hope that, leaving things as they are, we will be much better off a generation hence than we are to-day. To illustrate this apathy the case of Belfast may be mentioned. The Town Council of that Borough,—which from its manufacturing wealth and industry justly claims to be the commercial capital of Ireland—levied a Baths and Wash-houses rate some sixteen years ago under a pressure of public opinion that then existed. But the rate, though collected, was allowed to lie idle in Bank, and during the whole intervening years up to the present not a single movement was made to realise its purposes! The fund thus specially created for a special purpose under the authority of the Legislature amounts to some £2,000, which would be ample for the construction and furnishing of two commodious Hot-air Baths, with all the subsidiary conveniences of washing places and drying-rooms, and a very nominal tariff of prices would render them self-supporting, to say nothing of the great blessing they would be to "the health, comfort and welfare of the inhabitants." In like manner, some twelve years ago, fifty acres of land were set apart for a Public Park, and yet nothing has since been done to make them available for the purpose. It certainly is not creditable that such facts should exist in relation to a town that possesses the wealth of Belfast,—that boasts its enterprise and industry, its intelligence and ostensible zeal for progress and philanthropy.

We contend, therefore, that the time has arrived when the Government ought to intervene, and make *compulsory* for purposes of public health the carrying out of the Acts of 1846 and 1866. We contend also that Public Baths should form an essential part of our system of medical charities. Boards of Guardians have now power to construct hot-air rooms for disinfecting purposes, and a slight increase of cost would provide the addition of water; for, properly constructed, the disinfecting rooms could be made perfectly available as Hot-air Baths. Do not numerous cases occur daily in medical practice among the poor in which bathing in one form or another would be gladly prescribed as a curative, or, at all events, as a very potent assistant in the treatment of disease, were the means as available for *free bathing* as they are for the *free dispensation of drugs?* In fact, medical practitioners among the poorer classes are absolutely deprived of the opportunity of making bathing available in the treatment of many diseases for which they know it would be serviceable, because it would be nothing better than a mockery to order what the poor have neither in their own houses nor in public establishments the means of obtaining. The ratepayers are taxed without remorse to place any amount of drugs at the disposal of dispensary doctors, who are precluded from availing themselves of the remedial agency of the Bath, no matter how convinced they might be that bathing would be preferable to drugging.

This, we cannot help thinking, is *a very perverse, unnatural, expensive, and ignorant system, and fraught with great injustice, if not cruelty, to the poor.* We are perfectly satisfied that every intelligent dispensary doctor, and practitioner among the poorer classes generally, would be delighted to have it in their power to make bathing available as a remedial agent, as well in our large towns as in country districts, and there is no sound reason why Bathing Establishments should not be provided out of the public rates as drugs are provided. There would, to be sure, be a great decrease in the consumption of drugs, but we may safely conclude there would be a corresponding increase in the public health. Dr. Tucker of Sligo, who has had a very large experience on the subject, says:—"I am no ardent advocate, from medical principles and practice, of hot-air baths, and quite concur in the sentiment of the British Medical Association, that *there ought to be baths of hot air and warm water in every city, town, and village.* No medical institution can be worthy of the name without baths, for *disease is not to be cured by mere drugs alone.*"

Nor is disease to be guarded against by drugging, for mankind will not indulge in the nauseous luxury of drugs, save as a *dernier resort,* when disease has unmistakeably manifested itself. "There are," says Dr. Sheppard, Superintendent of the Colney Hatch Lunatic Asylum, in his excellent pamphlet on "*Bathing,*" "there are more clean skins (relatively clean) in the ratio of twenty-five to one among the artisans of London than there used to be twenty years ago. This is a great move in the right direction. But more remains to be done yet. *The true bath of hot air, and then of water,* by which the skin is rendered absolutely clean, must become *a great national institution.* Before it our prejudices will fall, and our ignorance be dissipated. Our national life will be larger, our means of *resisting* climatic changes and *repelling* disease multiplied."

Owing mainly to the disinterested and zealous efforts of Dr Barter, the Guardians of the Cork, Lismore, Fermoy, Middleton, and Dungarvan Union Workhouses, have humanely introduced the Hot-air Bath for the use of their hospital inmates. But the other Unions of Ireland have been indifferent to such laudable examples, and it requires active Government interference to overcome the obstructiveness that interposes between so great a blessing and the sick poor who pine for it. If Guardians could only be induced to look into this matter rationally, they would soon perceive that the saving to be effected through the agency of the Bath, as a beneficent substitute for injurious drugs and debilitating stimulants, would economise the rates to an extent they have no conception of.

Government interference is also required to enforce the construction of Baths in all Lunatic Asylums, County Infirmaries, Jail Hospitals, and Charitable Institutions over which the State has control. Those in authority, on whom the responsibility of Executive administration devolves, are not solicited to adopt any speculative novelty, or give effect to any new-fangled experimental notions, but they are asked to profit by the light of science and experience—to make available for "the health, comfort, and welfare" of the helpless, what science has demonstrated to be beneficial, and what a matured and multiplied experience has proved to be at once the most economical and effective means by which their sufferings can be alleviated.

We ask, how is it possible to read the evidence we have adduced in those pages respecting the benefits derivable to health generally from the use of the Bath, and more particularly in the treatment of disease, and yet remain indifferent to its introduction into our public Asylums and Hospitals? When we have the undoubted evidence of enlightened, and eminent scientific practitioners, testifying to the inestimable blessing the Bath has proved in the treatment of mental and other diseases, how can responsibility cloak itself with apathy, and make no effort to secure for the helpless sick so great a "boon to humanity?"

Into one or two Military and Naval Hospitals the Bath has been introduced with remarkable success, but it should be made available for the Army generally. No Barrack should be without its Baths, and were bathing encouraged as a matter of healthy discipline, one-half the diseases, and more, under which soldiers suffer, would be prevented. There is no prophylactic equal to it, and it is powerfully so in those very diseases to which soldiers are most exposed.

In Cavalry regiments the use of the Bath would be of inestimable service to the horses, as well as to the men, and one bath could be easily constructed suitable for both. Under its influence the sore backs and diseases generally which impair, on the slightest extraordinary exertion, the efficiency of even our "crack" Cavalry regiments, would be effectually guarded against, and in point of mere economy, there is no measure that would effect such a desirable improvement in the efficiency of the [illegible] establishment of a system of bathing [illegible] applicable—so easily attainable [illegible]

[illegible] Asylums a noble spirit of [illegible] good work, and willing to labour [illegible] humane cause. Here there is a [illegible] It need not be expected [illegible] administration will [illegible] matter, but much can be done [illegible] them respecting its importance [illegible] The machinery exists by which [illegible] brought home to those who [illegible] Hospitals and Asylums, and the [illegible] involves economy. We [illegible] may move those who have [illegible] take this matter up, and enlist [illegible] promote a cause the success of [illegible] spirit akin to that of a [illegible]

## CHAPTER XXVI.

*The Sanitary and Sanative influences of the Bath on Horses, Cows, and the Lower Animals generally—Report of the Committee of the Royal Agricultural Society of Ireland—The advantages of the Bath in farming operations, etc.*

WHAT has been said respecting Sanitary and Sanative influences of the Bath in relation to the human economy, is equally true as regards all domesticated animals. Two years after the Bath had been in use at St. Anne's, the experience Dr. Barter had acquired led him to the conclusion that it would prove singularly beneficial in the diseases to which those animals are peculiarly liable. *Prima facie*, on physiological grounds, there was every reason to believe that its effects on the lower animals would be similarly sanative as on man. It was indeed but reasonable to suppose that what was highly therapeutical in affections of the lungs, the bronchi, and congested conditions of the human body, would exercise a similar remedial power in pleuro-pneumonia and other distempers to which cattle are subject.

Resolved to bring theory to the certain test of experience, Dr. Barter in 1858 erected a *Cattle Bath* and instituted a series of experiments which proved remarkably satisfactory, and realised his most sanguine expectations. "The first occasion on which the Bath was tried," says Dr. Griffith, "was that of eight cows labouring under pleuro-pneumonia, out of which number seven completely recovered and one died. About a fortnight afterwards, three cows being seized with puerperal fever, a few days after calving, the Bath was at once had recourse to, with the result of two recoveries and one death, the Bath being administered to them twice a day. Since then, it has been the uniform habit to give every cow a few baths previous to calving, and *no case of puerperal fever has since occurred.* In cases of distemper, five or six baths were generally found to effect a recovery, and the animals did not show any after-appearance of being the worse for the attack."—*The Turkish Bath*, etc., p. 18.

The result of experience has proved that great a boon as the Bath is to humanity, it is calculated to prove even greater, when judiciously managed, to the lower animals whose wants cannot be made known. The undoubted success that attended its administration at St. Anne's, led the gentlemen in the vicinity to erect Baths for their cattle, and the farmers who kept stock followed their example. The utility of the Bath soon caused it to spread through the county, and there are now several in various parts of Ireland and in England. Two Veterinary establishments in Cork erected Baths for the regular treatment of cattle diseases, and Dr. Barter thus had the satisfaction of inaugurating a course of humane treatment for the lower animals, which is at once merciful to them, and at the same time a great protection against pecuniary loss to their owners.

In 1860 the Council of Royal Agricultural Society of Ireland appointed a committee to visit St. Anne's, "to examine and report upon the efficacy of the Turkish Bath as a remedy for distemper in horned cattle, and generally on its effects upon the health and constitution of the inferior animals." This report is very valuable, and ought to be attentively considered by every humane proprietor of stock—by every one indeed, who keeps domestic animals, and desires to maintain them in good health. The committee first examined the effects of the treatment at the St. Anne's Bath. They say—

"Two dairy cows in full milk, about three months calved, had been attacked with lung distemper, one on the 27th and the other on the 29th May last; neither were put under treatment until unmistakable signs of distemper had manifested themselves, in the rapid drying up of the milk and subsequent quick respiration. The use of the bath (two hours at a time) was ordered, at first three times, and when urgent symptoms, were got under, twice a day; and under this treatment, at the end of the third day, a manifest improvement in the state of each was the result, and at the end of the seventh or eighth day the further use of the bath was considered unnecessary; and from this period the milk, which had all but entirely disappeared during the violence of the attack, rapidly returned; and at the time of our visit, being the 17th and 19th days respectively from the date of the first attack, we were assured by the man who regularly milked them that they were both in quite as good milk as they had been previous to their being attacked; and we had no difficulty in crediting this statement, as it would have been impossible to distinguish either from any one of the 40 cows with which they were grazing, whether from the appearance of the udder or their general healthy character.

"We had also pointed out to us the several cows that were treated successfully during the last winter and early spring for distemper in the bath, and they were all, without exception, in perfect health, and stated by the herd to be in as good profit for the dairy as they had ever been previously. The diseased animals are not separated from the others, nor does any particular attention to, or change of, diet appear necessary.

"We were next shown three pigs of different ages, from four to eight months old, that had been attacked about ten days previously with a malignant form of disease, called in the country the black distemper, and from which a case of recovery scarcely ever occurs; the animal rapidly turning black about the head and ears, and generally dying in two or three days—sometimes even more rapidly.

"The effect of the bath in these cases seems to have been even more rapid and decisive than with the cattle, the fourth or fifth day's use of it having completely removed all distressing symptoms. Two of them we saw feeding greedily with the other pigs in the yard, and the third, though still a good deal cut up by the severity of the attack, feeding, and likely to do well.

"We were next shown a chesnut harness mare that had been attacked, twelve days previously, by strangles; she was treated with the bath two and three times a day, and no blister, or other application of any kind, used to the throat. This was continued for eight days, when she was so far recovered that the bath was discontinued, and when we saw her, although there were still the remains of the gatherings under the throat to be felt, she was perfectly recovered, her coat looking clear and healthy, and proved her recovery by travelling with us, on the inspection we subsequently made, a distance of some eight or nine miles, at a rapid pace, without showing the least distress."

They next proceeded to inspect the Bath of the late St. John Jefferies, Esq., Blarney Castle, who had an immense stock, as is devoted upwards of three thousand acres. There were several cattle under treatment, and the Bath, which was erected under Dr. Barter's directions, was similar to the one at St. Anne's, the only difference being, says the report, that "the fire is placed in the outer or cooling room, and over it is placed a large boiler, by which means various articles of cattle food can be prepared, and a constant supply of hot water kept, without any additional cost for fuel." The report proceeds:—

"The cases under treatment were in all six: five being the property of Mr. Jefferies and one that of a tenant of his named Forest, living near.

"Nos. 1 and 2 were well bred dairy cows that had been only under treatment two or three days. No. 1, a red cow, was evidently suffering severely from the attack, carried her head down, moved badly, had a quick draft in her breathing, and a short cough. No. 2, a roan cow, was also suffering under similar symptoms, but not so severely as No. 1.

"No. 3, the property of Mr. Forest, was likewise under treatment for but three days, and was much reduced in appearance, and could not be said to be in a better way than her two companions. The above three cows were at large in the paddock, and, after some time, we noticed the marks of recent bleeding on Nos. 1 and 2, and on questioning the man in charge, he informed us that both had been bled at the farmyard, previous to being sent to him for treatment, for no better reason, as far as he knew, than to see whether it would be of any service. It is scarcely necessary to say that this treatment was very injudicious, and Doctor Barter stated that it was entirely contrary to his usage or advice in such cases, and that it must render their recovery slow and tedious.

"We next went to the bath and found two cows in it, one that we shall call No. 4, in the outer or cooling room, just after having had several buckets of water thrown over her on coming out of the warm room, and another, No. 5, was still in the hot room. No. 4 was one of those tedious, uncertain cases of distemper that every one who has suffered much from it among their cattle is familiar with. After the violence of the attack is over, the animal seems to stand still; there are no urgent symptoms, but no recovery. They become much wasted in condition, a short hard cough remains, and you feel uncertain whether they will live or die, and would almost prefer the latter, for any value they seem likely to prove. This cow had been for over two months under treatment, and for a long time with little or no perceptible improvement till about a week previous to our visit, when a copious discharge of thick matter commenced from the nostrils, which the bath seemed to encourage, and when we saw her there was an appearance of a considerable quantity having been recently discharged; she was still in very low condition, but the man in charge described her as much improved since the discharge had commenced, and stated that they had had even worse cases that had entirely recovered under the same treatment.

"On No. 4 being turned out, we went into the hot room to see No. 5 in the bath. We were informed she had been about an hour and a half in, had been eight days under treatment, and as we were able subsequently to satisfy ourselves, had scarcely a trace of disease about her, and the next day was to be returned to the herd cured. She seemed quite to enjoy her position, the perspiration was rolling off her freely, and her breathing was slightly quickened. She carried her head erect, her eyes clear and healthy, and when she was removed to the outer room to get her douche bath, no one could mistake the feeling of refreshment and pleasure that the dashing of each successive bucket of water over her seemed to give, and when she had been slightly rubbed down she was turned out to graze, the day being fine and warm; but when otherwise there is a shed close by into which the animals are turned after leaving the bath, to let them further cool and dry before being allowed out.

"The last case, No. 6, was a fine cow that had been about a week under treatment, but had been neglected for some time before being brought to the bath, and was quite in a hopeless state, breathing hard and in pain, and on examination we found that she was suffering from a complication of diseases other than lung distemper, as we ascertained that the air was circulating freely through both lungs, and we further ascertained that one of her most urgent symptoms—constipation—had been for two or three days entirely unattended to.

"We next proceeded to the farm of Mr. Forest, one of whose cows we had seen under treatment at the Blarney bath, and for whom Dr. Barter had last winter put up in the end of a small out-house a simple bath, which had cost him six pounds. This bath is similar in construction to the others we have described, but too small, and faulty in its ventilation; for these reasons, since Mr. Jefferies' bath has been opened, he prefers, with his landlord's permission, sending any cows he may have in distemper, of which he seems to be never quite free, to the Blarney bath. Here we were shown two cows which by all the persons who had seen them early last spring, are considered to illustrate the extraordinary curative power of the bath beyond any of which we have yet spoken. They were described to us to have been in a far worse state for a considerable time than the cow No. 4 mentioned in our description of Mr. Jefferies' bath. We saw both grazing with the rest of the dairy stock in full milk; one was in perhaps *the best condition of any cow in the field* (about 25 in number) and the other a heifer that had had her first calf at three years old, and was, in consequence (independently of her severe ordeal of last winter), in low condition, but healthy, with a clear eye and a smooth coat.

We next proceeded to Mount Desert, the residence of Nicholas Dunscombe, Esq., who this year holds the office of high sheriff of the county. Here we were shown a very elegantly constructed bath, which he and his whole family use constantly, and attached to it a box or stall heated by a flue carried from the adjoining bath, in which he is in the habit of treating any of his horses in sickness as well as those he wishes to improve in condition or general health. There has been a good deal of distemper going among horses in the district for some time past, and he informs us he had treated several in the course of the last spring with the bath alone, with entire success. One of his carriage horses had been attacked very severely about four or five days previously, and when we arrived was actually in the bath; the door was opened for us to see him, and we found him as in the case of the cow at Mr. Jefferies', with the perspiration rolling off him, and evident marks about his nostrils and throat of the violence of the attack; but the groom stated that for the previous two days he had been on the mend, and expected that two or three more days of the bath would perfect his cure.

"Mr. Dunscombe further mentioned to us the case of a favourite setter dog that a short time before had got a bad attack of distemper, and with it a lameness in the shoulder, for which he could not account, He treated him with the bath, and after the third day a surfeit of boils broke out under the shoulder and on other parts of his body, and he rapidly got better, and in ten days was perfectly well."

The conclusions arrived at by the committee from their own personal investigations, aided by all the information they could obtain in the course of their inquiries, are thus stated :—

"*First*, The proportion of deaths to recoveries in the treatment of cattle distemper with the Turkish Bath does not appear to exceed one in ten, while the proportion that has been hitherto usual under other forms of treatment has varied from 1 death in 3 to 1 in 4 of the cattle attacked.

"*Secondly*, That the constitution is not impaired by the treatment with the Bath as it is by any of the other systems with which we are at present acquainted; and that this fact is particularly illustrated by the rapidity with which, in every case, the milk almost immediately returns on the animal being relieved from the disease.

"*Thirdly*, That in the treatment of several of the well-known serious diseases of the inferior animals, its use has been attended with the most favourable results, and particularly in all inflammatory diseases of the internal organs."

These conclusions are sound as far as they go, but subsequent experience has proved that great virtue resides in the *habitual* use of the Bath as the best means of *preventing* disease in cattle as in human beings. As preservative of health and preventive of disease, the Bath is an invaluable addition to every establishment and farm-yard, and it was soon observed that horses, after their day's work, or a long fatiguing drive, regularly looked to the Bath for refreshment. So much do the horses seem to enjoy the Bath," says Dr. Griffith, "that, on returning from their daily work on the farm, they constantly make for it, and 'nosing' the door, and pawing the ground, show their impatience to be admitted."

The committee found this to be the case during their inquiries, and state in their report—

> "One circumstance is worthy of remark, which applies to all the animals treated in the bath, and testified to by the men in charge of the four different baths we were shown, namely, the evident pleasurable recollection the bath seems to leave with them; all the different animals—horses, dogs, cattle, and pigs—going of their own accord to the door of the bath, and dogs particularly indicating their anxiety by waiting till it is opened, and then running in."

Domestic animals have no physic philosophers among them —no Sir Dominic Corrigans to warn them against the baneful effects of the Bath, and communicate learned verbiage to them, when suffering from pleuro-pneumonia, for instance—about how the hot air of the Bath is injurious to the lining membrane of their internal surfaces—happy in this respect, they only have their own providential instincts to prompt and guide them, and when the practical humanity of their masters provides a bath for them, we see what that prompting and guidance leads to. The attachment domestic animals manifest for the Bath, and for those who administer it to them, is one of the very highest tributes that could be paid to its incomparable salubrious properties.

Mr. Scriven states that the first horse to which he administered the Bath, he had to attend himself for five days, as his men were so ignorantly prejudiced against it that none of them would venture in. "The horse, after an hour or so, followed me round the apartment, and would not rest unless he had his muzzle on my shoulder, or was licking my hand. He recovered from a bad strain in the loins. Weeks after he recognised me on entering his stable, and licked my hand. I asked a friend, sceptical of the horse's attachment, to go up to him. The animal rejected his caresses, and followed me with his eye. *This is no exceptional case.* Horses, cows, sheep, and pigs, all show their satisfaction, and return to it with pleasure."

What a triumph it would be for Physic-drugging, if animals could only be induced to evince similar satisfaction when undergoing its nauseating and poisonous treatment, and manifest, too, an instinctive pleasure when it was about to be repeated. Man, proud of the reason he so lamentably abuses, may learn a lesson of wisdom from the instinct of the animals that he scarcely ever treats with an enlightened humanity. Nature speaks in them, and Nature bears no false witness—never errs.

Mr. Scriven is a mechanical engineer by profession, who gained his first knowlege of the Bath at St. Anne's. Having subsequently engaged in farming pursuits he turned his knowledge to excellent account. He erected a Bath, and has given the results of his experience of its value, extending over a period exceeding four years. "*My experience*," he says, "*embraces horses, cows, sheep, pigs, dogs, cats, hens, and chickens.*" The total working cost per annum of his Bath for fuel, working, attendant's wages, and repairs is £30. The fire is never out. The Bath supplies him with a kiln for drying grain, a constant supply of hot water for all purposes, besides the immense advantages derived from it in all farming operations. In his interesting paper on the subject, he treats of these advantages under five separate heads, which we will follow :—

1. *Treatment of Disease.*—In bronchitis, strangles, colic, dysentery, indigestion, dropsical swellings, distemper in pigs, sturdy in sheep, jaundice in dogs, mange in horses and dogs, sore mouth and feet in sheep, garget in dairy stock, swelling in the head of calves, and such like diseases he obtained successful results from the use of the Bath. "*No case*," he says, "*has arisen either on my own farm or on those of my neighbours* who have applied to me, *that has not readily yielded*, and these cases include *all diseases incidental to horses and farm stock.*" The

most violent forms of bats in horses are quickly got under. "Fifteen minutes in the hot room produce relief; and a recurrence of an attack after entering is very unusual."

Of *Cows* he says, "if only for the cure of one disease—distemper—this subject demands the attention of every stock owner in the country." In this disease the Bath rarely fails to effect a cure, and never when promptly and judiciously applied. *Dysentery* among dairy stock, so injurious to their milking, yields readily to the Bath. "On the fourth day after the beginning of an attack, I have frequently had cows back to their full milk. *Heat in the skin*, and *loss of appetite*, are got over the day they appear. Hardness in the udder, and stoppage in the teat, are thought little of here. These diseases require careful shampooing. I have never had a fully developed case of *black quarter* since the Bath has been built. Before that I lost several fine calves by this disorder. In swelling of the head in calves I have found it most effectual."

With respect to *Sheep*, he found the Bath effecting cures in "the most intractable, if not incurable, of all diseases—*sturdy*, or water on the brain. To say a sheep has it, is to condemn it to the knife." One animal afflicted with this disease he determined to make a trial of the Bath with. His herd who believed in the general efficacy of the Bath in disease of cattle, urged him not to make the experiment as it was sure to fail, and lose the price of the mutton. But Mr. Scriven persevered, and after a bath daily for three weeks the animal was turned out with the rest of the flock perfectly cured. Now observe—"Two months later, as I was going round with a friend from a celebrated sheep district, and long accustomed to examining the best flocks in the country, he pointed out *this very sheep* as a good specimen of my flock, both in health and condition." In another case he relates, a wether was attacked with dysentery for three weeks, suffering intense pain, and bleating pitifully. The Bath was resorted to, the thermometer ranged from 150° to 180° and when the animal was put in, it selected "the hottest part of the floor, and lying down seemed quite happy. He was left there several hours daily, and when turned out with the flock, rapidly put on flesh."

*The Pig* is erroneously considered an uncleanly animal. Man makes him so, for he seldom has the opportunity of washing. "On no animal," says Mr. Scriven, "have I got more satisfactory and decisive results than on pigs, whether fattening or brood sows. *Distemper* is rapidly relieved, the spot appearing on the skin in two hours. *I have had no fatal case of this scourge.* And the same thing I may say with reference to those of my neighbours who have sent their pigs to me. *When only a few hours old*, the two youngest pigs of a litter of fifteen appeared to be dying. The byre-man put them in the Bath for some hours, and brought them again to the litter. He repeated this frequently for some weeks till they were able to hold their own with their elder brethren. '*These two Pigs were dead three times, but for the Bath*,' was his answer to an objector. The first distempered pig I experimented upon was one of a litter of fatting hogs. He weighed one stone heavier than any of the same litter."

*The Dog*, "the first to welcome, foremost to defend," is subject to many diseases, and experience has proved that, as in the case of other animals, relief is to be found in the Bath. "I have had some remarkable cases of jaundice after distemper," says Mr. Scriven. "One pointer, during treatment, became so fond of the Bath, that when let loose, he ran to the door, and scraped at it. He was shot over for years afterwards. A setter that had lost his scent after distemper was sent to me for treatment. He recovered condition rapidly, being put in three times a week. His scent was quite restored."

There is every reason to believe that *Hydrophobia*, whether in the animal or human being, *is curable* by the judicious application of the Bath. Mr. Scriven never had a case, but a French Physician, Dr. Buisson, relates his own case, which is the only one on record of a cure having been effected, and the Vapour Bath was the agent employed. The Doctor attended a woman labouring under Hydrophobia, and after bleeding her, wiped his hands on her handkerchief, which was saturated with saliva. Having a scratch on the index finger of his left hand, he became innoculated with the virus, and the characteristic symptoms soon set in. He even felt a desire to run and bite people, and drank with great difficulty. In this condition, and quite conscious of it, he says, "thinking of nothing but death, I sought the most speedy and least painful. I had long believed that a Vapour Bath would prevent Hydrophobia, but not cure it. Resolved as I was to die in a vapour bath, I took Reaumur's thermometer in my hand, fearing that I should be refused the heat which I desired—42 degrees (126.2 Fahr.) *I was cured.* I did not expect it. From that moment I never had a single sensation of the disease."

This case warrants the belief that the Bath at a proper temperature, which is so much more powerful than any mere vapour box or bath could be, would prove curative of Hydrophobia either in man or animals if skilfully applied. At all events, no other known remedy, of all that has been proposed, has the slightest chance of success. "There is perhaps no malady to which mankind is liable," says Dr. James Bardsley, "that has called forth such a host of remedies for its removal, and alike defied their single and united powers. The long list of the *Materia Medica* has been ransacked to discover some one article capable of arresting the progress of this fatal disease, but all have hitherto proved inert."—Art. *Hydrophobia, Cyclopædia Pract. Med.*

Dr. Good, in his *Study of Medicine*, says, "There is, indeed, no disease for which so many remedies have been devised, and none in which the mortifying character of vanity of vanities has been so strikingly written on all of them." But is not this equally true of all Physic remedies in every case of serious disease? Is not *vanity of vanities strikingly written on all of them?* Dr. Bardsley admits, however, that "*Violent Sweating* through the influence of highly heated air has been recommended to the notice of the profession as a remedy in this affliction; but we are not aware that it has been sufficiently tried to enable us to determine its real claims to further use." Was it ever tried? Is there any case on record in which even the imperfect means at command for highly heating air, before the Bath was established, was applied in the treatment of this dreadful disease? The only case recorded in which even an imperfect vapour bath was tried is that of Dr. Buisson's, and it was successful. Physic Doctors will try any drug, but have no relish for natural agents. It is reasonable to expect, however, from the character of the disease, that the Bath would prove curative—most certainly it can do no harm, and must operate as an alleviative even should it fail to cure.

II. *Protective against the effects of Exposure and approaching Disease.*—Of the prophylactic properties of the Bath under this head, Mr. Scriven speaks highly. And, indeed, it follows that the Bath from its nature should be powerful in maintaining health, and warding off the influences that favour Disease. "Under the head of positive disease," says Mr. Scriven, "I am not able to quote an instance, on my farm, of lung distemper. This is attributable, I believe, to the *preventive power* always at command,—the rule being to put every animal in on the first symptom of disease." Mr. Scriven found that when his men and horses were sent to a distance, and exposed all day in inclement weather, on returning late at night, by putting them in a Bath at once, all injurious consequences were averted. "The men dried their clothes, and went home refreshed and warm. *The severity of the day had no effect either on men or horses.*" And his wise reflection is—"When we consider the number of severe days in the year, and the loss by sickness in consequence, the advantage of such a preventive will be manifest."

Mr. Scriven gives the evidence of a horse-dealer on the point whether horses, accustomed to the Bath, caught cold readily—"There is not a horse sheeted in the place. The top halves of the stable doors are always off. The horses are always ready for work. *You will not hear a cough in the worst season.* Whenever they are severely worked or exposed, they are put in the Bath, and that sets them all right."

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III. *Increase of Power, for Labour and Productiveness, in Flesh and Milk and Offspring.*—Mr. Scriven's experience under this head is most conclusive and satisfactory. He selected two cows to experiment on, and found that having gained in a given time one stone in weight, they gained eighteen pounds within the same period of time, when taking the Bath three times a week. "They became quite free from heated skin, and improved in appearance and handling. In this case I took means to measure the results. But equal results, though not accurately measured, have since been obtained. The gain being thus *one-third in flesh,* we may assume that there will be an equal gain in labour."

Labour power is, of course, to be measured by the vital power of the animal—man or beast. The source of vital power in all organised being is Nutrition; it follows, therefore, as a necessary consequence, that perfect Nutrition is the great source of labour power in animals, while, as in man, nothing can conduce to the healthy action of the Nutritive functions in comparison with the Bath.

With respect to *Barrenness,* Mr. Scriven says—"Having been disappointed in a foal from a mare I prized, I resolved to try on her the effect of the Bath. I was led to this by hearing of some cases in human beings, from which it was to be inferred that the use of the Bath had removed confirmed barrenness. *The result justified the expectation.* Not only was a foal obtained in due course, but the foals have not ceased during three years." This is perfectly in accord with physiological law.

IV. *Subsidiary Uses on the Farm.*—The great economy that follows the use of the Bath, in connection with farming operations, is very clearly and practically detailed by Mr. Scriven. He says:—

"In our damp climate, the power of drying grain or seed, with safety and economy, is too obvious an advantage to require comment. Last harvest, by means of the Bath and the kiln over it, I was enabled to save the produce of two acres of beans that was heating, and on its road to destruction. It was threshed in wet weather, and the beans carried at once to dry. In a few days a great part of a heavy crop was ground into meal, and fit for use.

"We lose one million sterling a year in flax seed, chiefly from the difficulty of saving it. Had every farm the facility of drying flax seed at once, and without the delay of using a public kiln, we might be that much the richer in feeding stuff.

"So much risk attends the process of drying flax straw, preparatory to hand scutching, that it is carried on in open temporary sheds, when a wet season retards, and sometimes stops, the operation. Here it could be accomplished at the time when labour on the farm is impracticable, the produce brought to market in better condition, and many weeks earlier. I am happy to say that some small farmers in my neighbourhood have applied to me for instruction how to convert a farm-office into a Bath.

"The injuries to horses' shoulders and backs from wet collars and saddles is avoided. The harness put into the drying-room at night is gradually and thoroughly dried by morning. How many corn sacks would be annually saved by a convenient place to dry them in quickly. To the laundry also the Bath is an addition of great importance.

These subsidiary advantages admit of no doubt, and conduce greatly to economy and comfort.

V. *Farm Servants.*—Considered in no higher light than as possessing so much labouring power, it is a matter of moment to get as much of that power out of a farm servant as possible. This Mr. Scriven finds the Bath does. "At first my labourers declined going in, on the ground that they had lost enough by work, and could not stand any more perspiration. One of them broke down on a hot day, when mowing. I said to him, 'Now, you are done for a week or so, you may as well try the Bath.' He went in, and had a vigorous shampooing. *The next day he took the lead in the meadow.* That night the space could not accommodate the applicants. The preservation of health among farm labourers is no small matter. My farm servants often work willingly through wet, windy days, well knowing that an hour in the hot room will send them home in dry clothes. This habit gives them also the power of enduring cold. Many have dispensed with flannel, even some at advanced ages. All find themselves in better health, freer from rheumatic pains, and firmer in muscle. One of my labourers was in the habit of wearing a flannel waistcoat and drawers, two waistcoats and trowsers, and a heavy coat. Two years ago he left off the flannel, and now wears but one waistcoat, one pair of trowsers, and seldom a coat. He says he is 'suppler' than he was ten years ago, and can now resume his potato-diet, which he had left off from an enlargement of the stomach."

Mr. Scriven relates some cures effected in the Bath in dropsical swellings and fever, and on the whole his evidence, as that of an intelligent, scientific, and practical observer, is worth a great deal, as testifying to the vast advantages to be derived from the use of the Bath in agricultural pursuits. How absurd are the vain speculations of theory in comparison with the results of his extensive experience.

There is no reason, says Dr. Haughton, "why the lower animals should be 'doctored' upon principles different from those which are applicable to the human race; and until this is acknowledged, veterinary surgery can never emerge from its present degraded condition."—*The Uses and Abuses of the Turkish Bath,* etc., p. 15. This is quite true; but Dr. Haughton goes on to say—"One circumstance only requires particular attention in the use of the Bath for the lower animals. None should ever be put into it, except such as are capable of perspiring freely. The *only* domestic animals which one would expect should be benefited are the horse, the cow, and the pig; and, accordingly, we do find that these animals have derived much good from its judicious enployment." Now Dr. Haughton evidently means to exclude the *dog*, for it is generally supposed that he does not perspire freely. Theory is one thing and experience another; and we take the practical experience of Mr. Scriven, and of others like him, as outweighing cartloads of theoretical assumptions. In a word, all animals will receive advantage from judicious bathing.

It is to be observed, that for the development of the full therapeutical powers of the Bath in the treatment of the lower animals, far higher temperatures are required than for ordinary prophylactic purposes. We have already stated this is the case with man, and equally so is it with respect to all domestic animals. In pleuro-pneumonia, for instance, a range of temperature from 200° to 250° can be safely employed, and in hydrophobia we would not expect a less temperature to have any sanative effect.

During the prevalence of the cattle plague in England and Scotland, 1866-7, it was stated that the Bath was tried in some instances and failed. But there is no authentic evidence to show where in any case that it was promptly and skilfully tried, failure was the result, nor do we believe that such evidence is forthcoming. Legislative and national ignorance was never more deplorably exhibited, than in the enactment making the slaughtering of all the healthy cattle in an infected district compulsory. If the erection of Baths in every district had been made compulsory, and the regular bathing of the cattle, under proper supervision, made equally so, some millions sterling would have been saved to the country. The number of cattle that died or were killed, on account of the plague, up to the week ended 21st of April, 1866, the last return we have at hand, is represented as follows :—

| England. | Wales. | Scotland. | Total. |
|---|---|---|---|
| 141,514 | 6,738 | 181,443 | 329,695 |

The estimated value may be taken at *three millions sterling*, and it may be safely affirmed that had the cattle been properly cared for, and fortified against disease by habitual Bathing, three-fourths of those that died of the Plague would never have taken it, or if attacked, the disease would have readily yielded to the judicious administration of the Bath. The vast importance of this subject, not to individuals alone, but in a national point of view, becomes at once apparent when we consider how largely national prosperity and wealth are involved. The Cattle Census of 1866 gives the following results :—

| United Kingdom | | Estimated Value. |
|---|---|---|
| Cows and other Cattle, .. | 8,566,478 .. | £74,956,682 |
| Sheep, .. .. | 26,375,993 .. | 48,805,587 |
| Pigs, .. .. | 3,994,029 .. | 11,582,684 |
| | Total, .. | £135,344,953 |

To promote and ensure the healthy condition of this immense property in animals, there is nothing comparable with the habitual use of the Bath. In his celebrated *Inquiry*, Jenner says—"The deviation of man from the state in which he was originally placed by Nature, seems to have proved to him a prolific source of diseases. From the love of splendour, from the indulgences of luxury, and from his fondness for amusement, he has familiarised himself with a great number of animals, which may not originally have been intended for his associates. The wolf, disarmed of ferocity, is now pillowed in the lady's lap. The cat, the little tiger of our island, whose home is the forest, is equally domesticated and caressed. The cow, the hog, the sheep, and the horse, are all, for a variety of purposes, brought under his care and dominion."

It has followed that among the animals so domesticated diseases have been engendered, to which, in a state of nature, they are never subjected; and as there are no means comparable with the Bath by which man can counteract the evils resulting from habits of life that violate nature's laws, so with animals—the prophylactic and therapeutical properties of the Bath are equally applicable to them.

*For training purposes*, the Bath is now employed in several racing stables; but in the majority of instances it is not skilfully directed, and trainers have prejudices against it. Admiral Rous, no mean authority, is highly in its favour. "By the introduction of the Bath," he says, "a new era has arisen; the present barbarous system of preparing horses to race by drastic purgatives, hot clothing, hot stables, and four and five-mile sweats, will be ameliorated; and we may look forward with confidence to a revolution, by the aid of Hot-air Baths, which will enable a trainer to bring his horses to the post in first-rate condition, without subjecting them to a destructive apprenticeship.—*Letter in "Times,"* March 26, 1863.

But whether applied to horses or to human beings, such a revolution in established custom is not easily effected. Indeed, it is probable that a regard for utility alone will accomplish more for animals in this respect, than what reasoning intelligence will be able to do with the same facility for man. No one can doubt the value of the Bath to the health and well-being of man; yet while thousands bathe, millions are content to despise its advantages. "In Australia," writes a friend, "sheep are now driven in lots into a Bath heated to 200°; they kill the scab, brush and clean the sheep at the same time—the scab being caused by a parasite worm, that is killed by the high temperature."

In rearing healthy racing stock the Bath is invaluable. The system of forcing the premature development of growth, so as to make the two year old colt accomplish more than was required from a three or four year old one hundred years ago, necessarily involves the breaking down of a vast number of animals that never see the starting post. Nothing is equal to the Bath for promoting healthy growth—for maintaining the Nutritive organism of the young animal in a perfectly healthy condition—for strengthening the constitution to resist morbific influences, and for rapidly developing and invigorating muscular power.

*Influenza* getting into a racing stable upsets the most astute and confident calculations, but influenza never need get into a stable, if the trainer is properly instructed in a knowledge of the Bath. It is a certain preventive of the disease, and should it be taken, in any case it is a certain and speedy cure. The only thing to be wondered at indeed, is, that owners of racing stock, generally so shrewd, intelligent, and calculating, and so alive to what is practically useful, have not ere this insisted on having their horses reared and trained by means of the Bath. The saving would be immense, and more than two-thirds of the horses now knocked out of training by disease would be enabled to fulfil their engagements.

We earnestly, indeed, advocate the Bath for all domestic animals as a matter of enlightened humanity. In town or country the cost is nothing in comparison with the saving effected [illegible] the good accomplished. What would man be without domesticated animals to minister to his wants and contribute to his pleasures? Yet how little *intelligent* humanity is bestowed upon them in return. There is a cruelty to animals in indifference to their healthful wants and enjoyments, which is as reprehensible as treatment of them with savage violence. Many highly philanthropic men subscribe to punish what is *legally* defined as "cruelty to animals," and yet they appear insensible of the fact, that they are guilty of a cruelty which the law does not define and punish, but which is reprehensible nevertheless—moral cruelty, arising from their ignorance of the laws of health, and their indifference to the simple and cheap means by which, *for their own great benefit,* the health of their domestic animals can be ensured.

Putting the matter in no higher light than that of utility, the Bath offers advantages to farmers and country gentlemen the value of which it would be difficult to overestimate. In regard to *economy* merely, those who have tested it concur in stating, that its utility pays it annual cost ten aye twenty times over, besides all the collateral advantages derived from it. A complete Bath with every requisite for farm purposes can be erected at a cost, according to size and local circumstances, ranging from £20 to £100. On the grounds of economy therefore, as well as of humanity, this subject ought to engage the attention of intelligent minds.

## CHAPTER XXVII.

*The summing up—Three main points for public consideration—The state of Medical opinion and practice—The position of the public in relation thereto—The present position of the Bath, and its future—Illustrative opinions—Conclusion.*

THERE are three main points to which the attention of an intelligent public ought to be more particularly directed, in seriously considering the subject-matter of this work. First, the state of Medical opinion and practice, as set forth on the testimony of the highest medical authorities. Second, the position of the public generally, in relation to that opinion and practice. Third, the position the Bath now occupies, and the great future that is before it, as "the keystone of the Hydropathic arch." On these points we will now offer a few observations by way of summing up.

I. *Is the state of Medical opinion and practice*, as set forth and illustrated in the preceding pages—every single statement made resting on the undoubted authority of Medical men themselves—is it such, we ask, as to inspire any confidence whatever in the scientific soundness of that opinion, or in the *safety* of that practice—to say nothing at all about its therapeutical value?

Have we not seen that Medical opinion—so falsely called science—is fickle, fluctuating, and changeable, without any solid basis of positive science to rest on, or any settled principles to inform and guide it—that it is "tossed to and fro, and carried about with every wind of doctrine, by the sleight of men, and cunning craftiness, whereby they lie in wait to deceive?"

Have we not seen that this opinion has no more rational foundation than traditional dogma—the offspring of ignorant, superstitious, and semi-barbarous ages—upon which has been engrafted the speculative fallacies of modern theorists, who have sought to warp and pervert the great healing truths of Physiology to sustain their fantastical and visionary crotchets?

In the glorious certainty and exactitude of modern science—in the philosophic induction on which it is based, what place does Medical opinion occupy? By the admissions of its own exponents—its standard writers, its great recognised leaders and authorities, is not its pretensions to rank as a science scoffingly repudiated?

Denied by its own authorised expounders all partition in established scientific truth, what then is the practical value of Medical opinion? It is opinion—nothing more, save that it is opinion acquired from erroneous sources, fostered by erroneous teaching, nursed into noxious maturity, and confirmed by erroneous professional training, and thus, false throughout, what has it produced—what could it produce but culmination in false and disastrous Drug practice, respecting which we have given such terrible evidence.

Medicine, said Lord Bacon, the great father of the Inductive Philosophy, "has been more professed than laboured, and yet *more laboured than advanced,* as the pains bestowed thereon *were rather circular than progressive.*" And commenting on this truth proclaimed more than two hundred years ago, what said a great medical authority, in addressing a Medical Association a few years back? Why, that he feared it was as true of Medicine now, as it undoubtedly was then! "I fear," said Dr. W. B. Richardson, "the same remark *holds good now.* Overwhelmed with details beyond all possibility of human recollection, *we are as far from principles as ever;* nay, *I think, farther*!"

Such, then, is Medical opinion! And it is before such an idol that the common-sense and intelligence of the age lies prostrate! 'Twas said, "wretches hang, that jurymen may dine," and so credulous patients must be drugged to death that

[illegible]

[illegible]

[illegible] are just what the public make them. [illegible] have for their conscience, and it is laid on and spread smoothly enough by an [illegible] Medical organ in this fashion:—

> "When either accident or disease obliges an unlucky individual to send for a doctor, the individual is not satisfied that his doctor should say 'Trust to the great healing power of Nature for recovery.' He is not satisfied that his medical adviser should order some simple rules for diet, and for hygiene, and then go his way. No—the individual expects

something tangible for his money, and does not consider that proper attention and a proper respect for his ailments have been shown, unless something tangible is done.

"If his bones are broken, whether they are displaced or whether they are in excellent apposition, some screwing, wrenching and eminently painful process must be undergone, or the surgeon's skill will be in jeopardy with his patient. *When a man has to make his living, these whims and vagaries and ignorances of his clients must be salved and flattered, or the poor doctor will eat his crust unbuttered.* Most of us like butter to our bread, and as we are not all rich and independent, *a little truckling must be done.*

"If this is true of surgery, *how much more true in medicine?* 'Oh! it is nothing, you'll be well to-morrow. No physic is required.' This is a sure introduction for another, and the patient thinks a better doctor. Some one who will *bleed, or purge, or give a vomit.* Somebody with globules or somebody with coloured water, or mixture of burnt sugar. The public still believe in doctors 'stuff' and takes its potions kindly and likes its clysters. Something must be done to please and something must take the credit of the cure.

"*The healing power of nature pulls the strings of life* The vital force is there unseen while the crude drugs are things tangible and present to the eye. To many 'drugging *is a bygone relic of a bygone age,*' but there are here and there dotted in our ranks, men *who play with poisonous elements*, and who are *heroic* for their neighbours' health—but *chary* of experiments on their own vitality.—*Medical Mirror, Dec.*, 1866.

And what says Dr. Ridge, the popular author of *Ourselves, Our Food, and our Physic?* Why just this—that, "bewildered by the fears and the whims of an ignorant public, *the profession is tossed about by its own adverse principles* on the one hand, and *its interests on the other.*" In plain terms, the profession cannot afford to be conscientious and honest! They find an "ignorant public," and they must pander to that ignorance! They find credulous patients full of "fears and whims," and they must treat them tenderly, and coin money out of them!

Observe, this is not an expression of our opinion. We are advancing nothing on our own authority. It is the legitimate and logical deduction from the premises laid down by medical men themselves, who indeed make no secret of their tactics, when "interests" tug on one side and "conscience" on the other. Just hearken to what an old practitioner, Dr. Inma says on the subject:—"When once a professional man that *it is for his interest* to humour his patients rather than instruct their ignorance, it is clear that the doctor who is most complaisant will be the *most successful* practitioner *as regards emoluments*, and the most able physician will be the one who has the least practice. The one is paid for *not* curing his patients, and the other starves *because* he cures them right off." —*Medical Mirror*, March, 1868.

This is Physic practice, as depicted by orthodox practitioners, and of course no one has a right to dispute such unquestionable authority. But in a more recent number of the same periodical, Dr. Inman goes deeper into this sort of practice, and the double-dealing and craft of the doctor is, of course, excused at the expense of the patient:—

> "A wealthy tradesman summoned a surgeon to bleed him; he complained of fulness of blood in the head, and of other symptoms which he attributed to impending apoplexy, and he knew the *remedy* (?) against this was bleeding. The Surgeon, an *honest straightforward man*, refused to bleed the patient, because he recognised that the man was suffering from fatty heart, and that degeneration of blood vessels that is increased by every debilitating agency; instead of bleeding, he recommended a tonic medicine and a good diet, and was dismissed.
>
> "The patient then summoned a physician *who made his aim in life to fill his pockets to the utmost.* To him the case was told and the treatment he was to pursue laid down, this doctor, more wary than the other, told the tradesman that his deductions were quite right, that they spoke well for his medical acumen, that if he persevered, the physician's business would be gone, etc., but though it was true the case required bleeding, that it was one for the use of leeches not for the lancet, and to this end half-a-dozen of the former were ordered, the aperient mixture which the patient wanted was prescribed, and a low diet was enforced.
>
> "The result anticipated by the Surgeon followed, and the patient had a paralytic stroke and *the physician then assured the sufferer that he would have prevented it had he been called in earlier, and that as it was the treatment had been successful in mitigating its severity.* It so happened, that the two doctors were close and intimate friends, and the first very naturally remonstrated with the second, but instead of hearing any apology, he received a lecture to this effect,—'My dear fellow, *if you want to get on as a doctor, you must not fly in the face of old fools who consult you.* I knew as well as you did that bleeding was bad for the man, but if I had not taken him into hand, *he would have gone to some one else who would*, and I did not

see any reason why *I should not get my fees out of him:* so I did the best I could—you did not get one fee, whilst I have pocketed my ten guineas."
—*Medical Mirror*, June, 1868.

This anecdote Dr. Inman vouches as "strictly true," and it is related in a paper professing to deal with "the *restoration* of health," as illustrative of the ordinary practice of such physicians, when they are consulted by "old fools," or by young fools, or by middle-aged fools either; and it is a practice that has drawn no reprobation from him. The ignorance of the fools is alone at fault—the physician's business is to fill his pockets, and to this end he must never strive to instruct the ignorance of patients who consult him, but must study to flatter their ignorance, pander to their prejudices, humour their absurd whims and sickly fancies, and drive a prosperous trade by pampering their infirmities, bodily and mental, even though by so doing they are sent more rapidly to their graves!

And this is gravely put forward in a leading medical periodical as the recognised ethics of the modern Physic School! How ignobly different from the ancient! Hippocrates, the great father of rational medicine, Pagan though he was, had a truer and nobler conception of what a Physician should be. In the "Oath" he framed for his disciples the morality of the Pagan puts to shame the detestable money-getting ethics of the modern Christian practitioners, of that school of which Dr. Inman has sketched a representative character.

"*I swear,*" etc., runs the Pagan oath, "*I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel. . . With purity and with holiness I will pass my life and practice my Art. . . Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption. . . While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art, respected by all men in all times! But should I trespass and vio-*

*late this Oath, may the reverse be my lot!*"—*Works of Hippocrates*, Syden. ed., vol. ii, p. 780.

Such was the noble and honourable estimate that Hippocrates formed of the high moral obligations of his profession. The base and sordid ethics of modern practitioners in humouring "old fools," and *bleeding* them in more ways than one, his morality would not permit him to follow; but Hippocrates was not a fashionable practitioner in his own day; and if he lived now his notions would be wofully antiquated, and it is quite obvious he would never attain metropolitan or provincial eminence. But God forbid that we should accept Dr. Inman's "representative physician" as the true type of all practitioners! We take the conscientious surgeon rather, who did his duty honestly—lost his fees, but maintained a quiet conscience and his own self-respect. Such an honourable practitioner could say with the illustrious Sydenham, the "English Hippocrates"—"When I come to die, I trust I shall have the satisfaction of beingly inwardly assured that I have not only endeavoured, with the utmost diligence and integrity, to recover the health of all those who have been my patients, of whatever rank or condition they were, none of whom have been otherwise treated by me than I desire to be, if I should be seized with the same distempers."—*Works*, p. 97. There is something better, after all than mere money-getting.

Dr. Inman, however, in the same paper, affords us another glimpse behind the scenes, and very strikingly illustrates how Physic practice is one thing in relation to *a fee-paying public*, but essentially a very different thing when it comes home to a Doctor's own person or family! If anything could open the eyes of a credulous public to the delusions of Physic practice, surely such a statement as the following must have that effect:

He was going abroad, he says, for some months, and "whilst I was travelling my family went to reside at a distance, and I was requested to say whom they should employ in case of illness. Now I knew pretty nearly every doctor in the place *as thoroughly orthodox members of the old school*, and, with my estimate of their style of drugging, *I naturally distrusted them all!* I therefore gave my wife certain simple directions which would suffice for ordinary matters, and told her that *if she must give physic, to buy a homœopathic medicine chest, and administer globules from the first bottle in one corner, and go round and round the box until the child was dead or better.* On such a plan *I knew that it would have a better chance of restoration than by using active medicines!*" Yet this gentleman is physician to the Liverpool Infirmary, is a great advocate for alcoholic stimulants, ostensibly professes high faith in drugs, and recommends *calomel* as an excellent medicine for infants!

Thus the relation in which the public stand to Physic practice is simply that of fools, dupes, and victims. If any one can arrive at any other conclusion, in the teeth of all the evidence we have given from medical men themselves, why, then, he must have a very peculiar mind, and a very peculiar logic of his own. All that need be said is, that people of his class are admirably fitted for Physic patients.

III. *The position the Bath now occupies, and the great future that is before it,* merits not only the serious attention of the truly intelligent among the public, but also the candid consideration of every conscientious medical man, who desires the rational progress of the Healing Art, and the purification of his profession from the corruption of empirical practices which now disgrace and degrade it.

"A new truth," remarks Dr. Herbert Mayo, "has to encounter three normal stages of opposition. In the first it is denounced as an imposture; in the second—that is, when it is beginning to force itself into notice—it is examined, and plausibly explained away; in the third, or *cui bono* stage, it is decried as useless, and hostile to religion. And when it is fully admitted, it passes only under a protest that it was perfectly known for ages—a proceeding intended to make the new truth ashamed of itself, and wish it had never been born!"

Although it is only twelve years since Dr. Barter established the Bath still it may be said, that, as a new truth in therapeutics, it has already successfully passed through all Dr. Mayo's stages. Notwithstanding, its adoption by the profession and the public is not yet as general as the interests of humanity require, the progress made has been most gratifying, and the Bath now occupies an unassailable position. This is not an age in which anything of professed utility can be hounded down by prejudices or envy. Medical practitioners must themselves submit to be guided and judged by the tests of experience, and a presumptuous *ipse dixit* is now regarded by the intelligence of our day only as a shallow device for the concealment of reprehensible ignorance. "However plausible," says Dr. Sheppard, "may be the theories which relate to the treatment of disease, and however sanguine may be the views of enthusiastic specialists, they have no practical significance in this practical age, *if they are not sustained by experimental facts, and elucidated by impartial inquiry.*"

It is to the elucidation of the merits of the Bath by *impartial inquiry* that its rapid extension throughout the United Kingdom is alone attributable. Our most approved writers on physiology and other branches of medical science acknowledge the great prophylactic and therapeutic virtues of Hydropathy generally, while an enlightened and skilful body of scientific practitioners are becoming familiar with those virtues, and making their powers available in the regular treatment of disease. Indeed, no physician can now be considered *properly qualified* as a practitioner, or *worthy* of having confidence reposed in him as such, who is pleased to remain in ignorance of those powers, or refuses to avail himself of their simple efficacy.

"I do not like working with tools—I don't understand," was the reply of a medical practitioner of high provincial standing and reputed intelligence, to a gentleman who had derived great benefit from the Bath, and consulted him about continuing the practice. Could there well be a more unworthy confession for a medical practitioner to make? Was it not his primary duty to study and understand the properties and uses of all "tools" proposed for the treatment of disease? What solid pretensions can any medical man advance to be considered an intelligent, scientific, and honourable practitioner, who does not keep himself fully acquainted with all the remedial discoveries and improvements of his day? Surely it is for his presumed knowledge, and not for his wilful ignorance that, in credulous reliance on his abilities, patients consult him?

An honest physiological practitioner, observes Dr. James Wilson, "if he be a *true* man, would not hesitate to go far and wide, barefooted if need be, to seek and know any means promising to aid him in a calling so sacred, that of mediator between disease and health, indeed, I might say between life and death. And never should it be absent from his mind, that on his skill and knowledge will often depend whether the result of a day will end in the silent tomb, or in the continued consciousness of heaven's cheering sunshine..

"He is but a so-so doctor, believe me, who pooh-poohs any new or vaunted discovery he does not understand, fancying that abuse or sneers will suffice as an apology to his conscience for putting off the duty of learning or inquiry,—a process, mayhap, so dreaded and unused by his rusty or faulty intellect. Or he may be held back by an instinctive dread that honest investigation might throw unwelcome light on the clouded brain, and so display the neglect and deplorable deficiencies of an understanding so conventional, absurd and borné."—*Water Cure*, p. 430.

In fact it is no longer possible, for the most prejudiced and self-opinionated physician, however great his practice, and however secure he may imagine his hold to be on public favour, to superciliously ignore the Bath without damaging his own reputation, because the Bath is now an established institution, the educated and discerning public are becoming daily more alive to its merits, and the most eminent authorities of the age find in it their most effective instrument. Addressing the London Medical Society eight years ago, Dr. Thudichum said—"*A boon to mankind, your nation, and every individual in this room, hot air, combined with cold affusions, with shampooing, with exposure of the body to light and air, await your approval as* every degree of stimulation or sedation; for in the exclusive, combined, or alternate use of stimulants and sedatives consists the whole art and mystery of Physic. On the score of *power, certainty*, and *safety* in action, in the attainment of these ends, our water-cures exemplify the superiority of our remedial measures, over any and all the ten thousand articles and compounds of the Pharmacopœia."

. In verification of this, the multiplied evidence of experience is incontestible. All the resources and contrivances of Drug Medication have utterly failed in supplying any stimulant or sedative so invariably effective and consistently applicable to every individual constitution, and to all bodily conditions as Hydropathy commands, while it is equally true that the Bath is the perfection of the Hydropathic system—the keystone of the arch. The experience of Dr. Barter is conclusive on this point, and cannot be gainsayed—"*With the Hot-air Bath I now do more good in a week, than I did in a month with the old Hydropathic treatment.*" And in this every practitioner will concur who has had competent experience of the powerful therapeutical properties of Heat when skilfully applied. In fact, with respect to the remedial virtues of Temperature, in its application to disease, only an enlightened few among the Medical profession have had any experience at all; but the proved results warrant the opinion that we have as yet only witnessed the dawn, as it were, of a more brilliant and successful future.

The future of the Bath is thus full of promise and pregnant with blessings to suffering humanity; but what rational mind can repose confidence in the future of mere Physic? Have we not seen that men of the highest professional rank, in the maturity of their experience and years, admit there is no certainty in Medical drugging, save the certainty of the frightful evils it causes? Yet, with a reprehensible inconsistency, they continue to uphold a system so repugnant to nature, and so destructive to human health and life. By doing so,—by ostensibly following a system in which they have no faith,—they not only obstruct, as far as they possibly can, the progress of what is natural, rational, and scientific in the treatment of disease, but they directly aid in perpetuating the deceptions and superstitions which still haunt and delude the public mind respecting the supposed remedial virtues of Physic. They thus expose ignorant and credulous patients to the destructive practices of Drug quackery in its vilest aspect; for the general run of patients cannot discriminate between the drugging of professed quacks and that of "legitimate" practitioners, whose practice justified Dr. Forth in declaring—"*There is scarcely a more dishonest trade imaginable than Medicine in its present state.*"

What, says Sylvester Graham, "must we think of those creatures wearing human shape, who either with the good intentions of honest ignorance, or with the base motive of cupidity, with exceedingly little or no knowledge of the human constitution and the laws of life, and without ever seeing their thousands of patients or knowing anything of the nature or causes of their diseases, open their patent medicine manufactories in London, in Philadelphia, and New York, and other places, and deluge the earth with their panaceas, and catholicons, and hygean pills, and thousands of other vile preparations, and boldly recommend them as infallible specifics for every disease that man can force upon his nature? Surely they are to be regarded as among the very worst enemies of their species; and many, if not most of them, ought to be ranked with pirates and assassins; for, with little if any less turpitude of heart and wickedness of intention, they destroy the lives of hundreds where pirates and assassins do of one. And *they will continue their successful career of human butchery, till the all-pervading ignorance and delusion of our fellow-creatures, which render them capable of being deceived by such impostors, and made willing to swallow immeasurable quantities of their pernicious drugs, shall be dispelled by the universal diffusion of knowledge in regard to the constitutional nature and relations of Man.*"—*Science of Human Life*, par. 1069.

It is inseparable from the Drug system that it should foster such vile empiricism, and the only hope is in an educated and intelligent public renouncing the delusions by which alone that system thrives, and in consequence of which confiding patients become its victims. We need not look to medical corporations, schools, or colleges—to the "subtle seniors" of the profession whose fashionable empiricism has gained them ephemeral reputation and profitable practice, and who assume to be the heads and guides of medical opinion—to such as these we need not look for any changes that would interfere with the vested rights of ignorance, and disturb the contented repose of a lucrative routine. Those are they who obstruct progress—who sneer at the great truths of Hydropathy—who either ignorantly or wilfully misrepresent the Bath, and ignore the sound principles of physiology on which it incontestibly rests, while they do all in their power to frighten the credulous dupes, who foolishly trust them, against having recourse to the only mode of treatment that is naturally and rationally remedial in disease. As Dr. Esdaile says—"they howl against and persecute the discoverer of a new truth which disturbs their successful routine, wounds their self-love, and endangers their easy gains." From such nothing is to be expected but a persistence in established error—a bigoted and intolerant adherence to dogmas of practice whose bountiful harvests are reaped in human misery and death.

There is pleasure in believing, however, that among the rising generation of practitioners there is a disposition to escape from the slavery of blind obedience hitherto exacted by established medical dogma. A spirit of free inquiry is at work to test all systems by their ascertained results, and the very changes that are perpetually occurring in medical practice is the best evidence of the fact, that old faith in its assumed virtues has been rudely shaken—that such practice fails to satisfy the reasonable expectations either of thoughtful patients, or of conscientious and honourable practitioners. There is a growing conviction that the whole system of Drug Medication is repugnant to Nature and demonstrably false—that it is essentially unphilosophical in theory, and remorselessly destructive in practice. Hence the is an increasing aptitude of mind to consider rationally, on its own merits, whatever may be proposed for the alleviation of human suffering.

It is for an intelligent public to foster and encourage such a disposition among the active-minded and enlightened practitioners who appear alive to the obligations and responsibilities of their profession. Rational medicine can only make satisfactory progress by commending itself to the common sense of the community, for what pays will always prosper, and while public credulity rewards with wealth and honours the vile artifices of quackery, there will never be wanting accomplished adepts to practise them.

In conclusion, we say to patients, repose no faith in the confirmed bigots of the medical profession—in men who irrationally condemn what they confessedly have not studied and do not understand—the majority of whom are mentally incapable of appreciating what the greatest minds of the profession have not hesitated to pronounce and hail as an inestimable "boon to humanity."

The Bath is now an established success. It has worked its way solely on the inherent virtue of its own merits, not only without adventitious aids, but in despite of all the opposition professional ignorance, prejudice, and selfish interests could array against it. Its incomparable therapeutical properties are acknowledged, as we have seen, by every enlightened member of the medical profession who investigated rationally for himself; and the medical man—no matter what his common repute may be—who affects to ignore so powerful and salutary an agent in the treatment of disease, only demonstrates his own culpable ignorance, and how thoroughly incompetent he is to be safely consulted when the interests of health and life are involved.

Let patients take this truth with them as a safe general rule to be acted on—the medical practitioner who declares the Bath unsuitable in their case, and who can give no better reason than that *he* thinks so, supplies *prima facie* evidence of his own physiological ignorance, and complete unfitness to treat disease on natural, rational, and scientific principles. Let patients also remember that *the disease has yet to be discovered to which the Bath is not applicable*—in the treatment of which the skilful and judicious use of Temperature is not calculated to prove the most potent curative known, while in cases where, from whatever cause, absolute cure is hopeless, the bath admittedly possesses unequalled alleviative powers—a salubrious restorative influence, beyond comparison superior to all the artifices of Physic—to all the resources and contrivances of Drug Medication.

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